CONNECTING ELDERS AND STUDENTS WITH A SOCIAL

AND INTERACTIVE ORAL HISTORY EXPLORER

by

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A thesis submitted to the Graduate Council of
Texas State University in partial fulfillment
of the requirements for the degree of
Master of Fine Arts
with a Major in Communication Design
December 2013

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DEDICATION

This thesis is dedicated to my wife, Heather, for her enduring patience and constant support; my daughters, Eliza and Josephine, for the brightness they shine into my world; my parents, Jim and Mary Hollifield for their continual encouragement during my academic and professional pursuits. In the words of Alfred, Lord Tennyson, "I am a part of all that I have met…"

ACKNOWLEDGEMENTS

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INTRODUCTION

STATEMENT OF THE PROBLEM

Disengaged students have difficulty learning and isolated senior citizens feel useless. Both issues stem from a culture that experienced significant change in the last century. Student engagement is a critical topic for educators. Educational researcher Helen Marks (2000) defined engagement as "a psychological process, specifically, the attention, interest, investment, and effort students expend in the work of learning" (pp. 154-155). In a similar refrain, the former director of the National Survey of Student Engagement (NSSE) calls engagement "the time and energy students devote to educationally sound activities inside and outside of the classroom" (Kuh, 2003, p. 25). Student disengagement has serious academic consequences, including poor academic performance, disruptive behavior in the classroom, and absenteeism (Klem & Connell, 2004).

In addition to the student disengagement, a feeling of uselessness among senior citizens is a critical issue. While society once positioned elders as knowledgeable mentors, many older individuals now feel that they lack a meaningful role (Stevens, 1993; Taylor & Turner, 2001). A weakening bond between grandchildren and grandparents places a greater importance on intergenerational ties. A paper published by the International Longevity Centre states that "as family structures evolve, kinship networks change and the 'extended family' recedes, the role of intergenerational relations at the community and societal level is growing in importance" (Lloyd, 2008, p. 29). Lack

of an "ego supportive social role" contributes to feelings of uselessness in the elderly population (Stevens, 1993; Taylor & Turner, 2001). Additionally, seniors living in long term care facilities often lack opportunities to interact with young people (Tatchell & Jordan, 2004). Statisticians predicted that the number of individuals over the age of 65 will exceed 69 million in the next 20 years (Administration on Aging, 2009), with more than 40% of these individuals residing in nursing homes before they pass (Murtaugh, Kemper, Spillman, & Carlson, 1997). This percentage represents a growing population of elderly citizens with few opportunities for intergenerational relationships.

STATEMENT OF OBJECTIVE

Making History Curriculum Relevant

The perception of irrelevant curriculum is one contributing factor in student disengagement. Successful learning requires meaningful context. As one teacher explains, "Students don't see the relevance of anything in school; it (school) doesn't relate to their music, etcetera. They don't see the point" (Carlson & Lasater, 2013, p. 18). The need to relate personally to information begins at a young age. Vygotsky's social constructivist approach to learning describes language, systems for counting, and writing as "psychological tools" that the child uses to carry out an intention within a specific context (Lloyd & Fernyhough, 1999; Vygotsky & Cole, 1978). Stripped of context, these "tools" no longer have meaning for the student. Papadopoulou and Birch (2009) state, "For the children, the activity is not significant because they 'did some writing' but because they successfully conveyed a message to their mum… A 'tool' is only perceived as such if the learner understands what it is a tool for, which entails knowing the wider context and its function" (p. 278).

One might reason that a lack of context and function may cause some students to struggle with the study of history (Liu, Shen, Warren, & Cowart, 2006). Educators often rely heavily on memorization and recitation in the history classroom. To stimulate student engagement, this thesis project seeks to provide meaningful context to historic events through the use of narrative, as stories make history relevant for students.

Stories are one aspect of an inquiry-based history program. In a 2008 study, students involved in an inquiry-based history program outperformed the control group students in factual knowledge, reading comprehension, and historical thinking. Fritz Fischer, former chairman of the National Council for History Education, praises such programs, stating, "They encourage students to see history as a rich trove of stories and interpretations, rather than a staggering assemblage of facts" (Gewertz, 2012, p. 10). By focusing on stories, students can recognize the wider context and function of historical study as a means to think critically about the present and future. In the words of Margaret Fairless Barber, "To look backward for a while is to refresh the eye, to restore it, and to render it more fit for its prime function of looking forward."

Some researchers believe that true stories told by those who experienced them can strengthen this established instructional strategy (Powers, Bailey-Hughes, & Raft, 1989). For example, the Foxfire project revealed that the ability for students to learn history increased when students related to stories (Wigginton, 1985). First-hand stories allow students to "discover how historical events affected people like themselves, a revelation that will expand their historical consciousness and make their classwork more meaningful" (Ritchie, 2003, p. 197). The ability for the student to identify with the storyteller, living through the described experience vicariously, provides the wider

context and function evangelized in Vvgotsky's social constructivist approach. One source for such first-hand stories is hidden in plain sight.

Restoring Elders as Mentors

To restore their position as community mentors, this thesis project seeks to reconnect senior citizens with young people, allowing them to share their wisdom through stories. Studies indicate that senior citizens have a strong desire to talk about the past (Quackenbush & Barnett 1995, Merriam 1993). Numerous projects have facilitated connections between senior citizens and young learners with promising results (Freeman & King, 2001; Ellis, 2003; Spudich & Spudich, 2010). In one example, researchers indicated that the storytellers experienced feelings of "personal pride, accomplishment, and value" (Powers, Bailey-Hughes, & Raft, 1989, p. 486).

Intergenerational Oral History

Intergenerational oral history can provide a way to reengage students and reconnect seniors to young people in meaningful ways. By engaging students with stories and embracing elders as educators, this project seeks to address the problems of student disengagement and isolation of senior citizens. Intergenerational oral history provides a scaffold for such work. Oral history is "a recounting of some experience, usually told to an interviewer, for historical purposes" (Stucky, 1995, p. 1). Intergenerational programs are "social vehicles that create purposeful and ongoing exchanges of resources and learning among older and younger generations" (Kaplan, 2002, p. 306). Intergenerational oral history combines both concepts into a single practice. Engaging students with stories while providing senior citizens a platform to share their wisdom is at the heart of intergenerational oral history. Successful intergenerational oral history programs,

however, do require significant time and planning (Ellis, 2003). Technological innovation can address these challenges. This thesis introduces *Living History*, a software program designed to provide new intergenerational oral history opportunities to both students and seniors.

OVERVIEW OF METHODOLOGY

The design of *Living History* follows a methodology formulated by Paul Nini of Ohio State University. It consists of 2 phases. The first phase centers on investigation and planning. The second phase addresses development and user research (Nini, 2006). Phase I includes an investigation of the design problem (disengaged students and isolated senior citizens) and includes the formation of design strategies to address the problem. Additionally, phase I provides an analysis of the strengths, weaknesses, opportunities, and threats (SWOT) surrounding intergenerational oral history. An audit of similar oral history projects follows. These activities lay the groundwork for phase II by bringing forth a strategy to guide subsequent work. Phase II includes the delivery of initial insights, personas, scenarios, process flow diagrams, sketches, wireframes, comps, prototypes, and the final outcome as artifacts of an iterative cycle of creation, evaluation, and refinement.

CHAPTER II

PHASE I: INVESTIGATION AND PLANNING

STRENGTHS

Intergenerational oral history has four key strengths. First, intergenerational oral history fosters learning. Second, it imparts personal resilience in seniors. Third, it cultivates historical empathy. Fourth, it nurtures intergenerational empathy. *Living History* seeks to take advantage of these four strengths.

Intergenerational oral history projects encourage students to investigate areas of history they find personally important (Loewen, 2008). This type of inquiry-guided learning promotes knowledge construction and active investigation over memorization (Slatta & Atkinson, 2007), successfully engaging students. One high school Social Studies teacher verifies, "My students learned more about certain things that they researched for their interview than they would have learned from some book from the library" (Mills, Schechter, Lederer, & Naeher, 2011, p.44). *Living History* seeks to foster learning by allowing students to freely explore the topics that are of interest to them.

Some argue that memory is unreliable and can be "distorted by physical deterioration and nostalgia in old age, by the personal bias of both interviewer and interviewee, and by the influence of collective and retrospective versions of the past" (Thomson, 2007, p. 53). Oral historians disagree, however, indicating "the subjectivity of memory provided clues not only about the meanings of historical experience, but also about the relationships between past and present, between memory and personal identity, and between individual and collective memory" (Thomson, 2007, p. 54). In this regard,

oral history is a lens for understanding how "people make sense of their past… and how people use [historical memory] to interpret their lives and the world around them" (Frisch, 1990, p. 188). For the elder, this synthesized meaning plays a key role in coping with the challenges of aging. In fact, counseling techniques such as life review and reminiscence demonstrate a positive effect on the emotional health of senior citizens (Hamilton, 1992; Stevens-Ratchford, 1993; Youseff, 1990). In life review, a counselor helps the senior to incorporate positive and negative memories into a cohesive self-concept (Smith, 2000). Reminiscence is telling stories about memories. Such activities allow elders to "gain distance from the emotionally difficult and develop an increased sense of mastery" (Deutchman & Birren, 1991, p. 4). In other words, finding meaning and patterns in the past empowers elders to more easily process emotions about the present (Kaminsky, 1985). Scholars call this quality "resilience" or "the ability to transform adversity into a growth experience and move forward" (Hengudomsub, 2007, p. 115). One study further emphasized the value of reminiscing, suggesting that elders perceived self-actualization and esteem needs to be more important than physiological needs, flipping Maslov's hierarchy on its head (Majercsik, 2005). This thinking supports the notion that biographical aging is just as critical as biological aging (Birren, Kenyon, Ruth, Schroots, & Svensson, 1996). In other words, in old age, the story of oneself is just as essential as biological matters. *Living History* seeks to impart personal resilience by providing elders with a framework for reminiscing.

Intergenerational oral history cultivates historical empathy. The topic of historical empathy is absent from the history curriculum in many educational institutions, resulting in a lack of student interest in the subject (Cobb, 2013). Barton and Levstik (2004) define

historical empathy as the use of the perspectives of those in the past to explain their actions. By understanding the goals of individuals, their beliefs, and their culture, one can deduce the logic behind their behavior. Working with primary sources, firsthand accounts of historical events, provides a unique perspective within a certain time and humanizes the events, provoking higher-order thinking in students (Poulton, 1972). As witness to these perspectives, students gain an understanding of the subtext, a skill evident in the work of a historian (Wineburg, 1991). Students can translate these perspectives into an awareness of the subtext through the process of narrative inquiry. By analyzing the stories of the elders, students play the role of historian and place themselves within the story. Colby (2008) writes, "If successful in implementation, students will come to appreciate the complexities of historical people, events, and time periods" (p. 61). Such an appreciation allows students to draw their own conclusions about the past and arrive at a richer understanding of humanity in general. Endacott (2013) suggests that such thinking will "put students in an advantageous position to analyze and evaluate their own beliefs and actions and those of others they encounter in the present." In the words of theologian Søren Kierkegaard, "Life can only be understood backwards; but it must be lived forwards" (Geertz, 1995, p. 166). *Living History* seeks to cultivate historical empathy by allowing learners to see the world through the eyes of those who experienced historical events firsthand.

Intergenerational oral history nurtures intergenerational empathy. By nature, storytelling is inherently personal and relational. Gardner (2003) writes that "it is important to remember that the force of the spoken word for historical analysis always rests upon its intimacy, together with its rootedness in the local, the personal and the

particular. It is this which gives to oral testimony its capacity for depth and authenticity"
(p. 187). An intimate, personal story has the power to move listeners deeply. One
scientific study indicated that listening to a story can connect a listener to the storyteller
at a biological level. As a story unfolds, the brain activity of the listener mimics that of
the storyteller (Stephens, Silbert, & Hasson, 2010). Abrahamson explains, "The teller and
the listener come together on a cognitive and emotional level that allows the listener to
relate to the teller from his or her own personal framework and thus grasp the teller's
perception of the content at the same time" (1998, p. 441). From a cognitive point of
view, the value of storytelling resides in the interaction and understanding between
storyteller and listener (Peck, 1989). Because of this connection, intergenerational oral
history programs carry the potential to confront ageism and positively change the
attitudes young people have about the elderly. Prior research supports this claim (Bales,
Eklund, & Siffin, 2000; Chorn Dunhan & Casadonte, 2009; Lynott & Merola, 2007). To
forge intergenerational bonds, however, students must have opportunities to interact with
senior citizens. While family structures may provide occasions for grandchild to connect
with grandparent, these ties do not exist at the societal level (Lloyd, 2008). *Living History*
seeks to create new opportunities for students to personally connect with elders through
stories.

WEAKNESSES

Intergenerational oral history, as it is traditionally conducted, has four key
weaknesses. First, recruiting elders is time-consuming. Second, scheduling interviews is
demanding. Third, creating a transcript is arduous and may result in a loss of meaning

and texture. Fourth, current storage and retrieval methods inhibit sharing. *Living History* seeks to respond to these four weaknesses.

Recruiting elders is time-consuming. In many cases, simply finding elders to speak on a particular topic can be discouraging. The level of difficulty in finding elders varies by topic. From his own experience, Ellis (2003) complains, "Finding elders to share WWII stories with students was relatively simple, while finding elders to discuss the Civil Rights years involved over a month of work" (p. 71). To make matters worse, once recruited, the reliability of elders may fall short. Previous work indicates as many as 50% of the elders may not be reliable (Ellis, 2003). *Living History* seeks to widen the pool of reliable elders available and willing to participate.

Scheduling interviews is demanding. Interviews require that both the student and elder are available to meet. Even when retired, seniors remain involved in many activities, making it difficult to coordinate schedules (Ellis, 2003). *Living History* seeks to provide a method for students and elders to communicate in an asynchronous way, avoiding scheduling conflicts.

Creating a transcript is arduous and may result in a loss of meaning and texture. Traditionally, scholars painstakingly transcribe oral history accounts into text. In the classroom, this process can be time-consuming and difficult since the number of computers per classroom cannot support the average class size (Mills, Schechter, Lederer, & Naeher, 2011). While transcription is a slow process, the potential for loss of meaning is also cause for concern. Text offers individuals an easy way to browse, search, and publish content, yet it can strip meaning from memoirs. Frisch (2006) explains, "Meaning inheres in context and setting, in gesture, in tone, in body language, in

expression, in pauses, in performed skills and movements. To the extent we are restricted to text and transcription, we will never locate such moments and meaning, much less have the chance to study, reflect on, learn from, and share them" (p. 103). *Living History* seeks to preserve the meaningful visual and auditory nuances inherent to face-to-face interviews.

Current storage and retrieval methods inhibit sharing. While the Internet makes wide distribution of oral history interviews possible, some believe easy access may lead to misuse of the material. This overcautious mindset may be responsible for the perception that historical research is a discipline "defined and limited by the labors of a single historian toiling in the dusty archives" (Mihm, 2008). Frisch compares the audio and video collections of the best oral history libraries to the unwatched home movies typical of many families (Frisch, 2006). In describing oral history in the classroom, Whitman (2012) reveals "The old adage that interview recordings remain entombed in boxes or in a teacher's desk remains sadly true." *Living History* seeks to provide broader access to oral histories through digital distribution.

OPPORTUNITIES

Intergenerational oral history has four key opportunities. First, tablet computers allow for broader access to software. Second, social networks make connecting with others easier. Third, user-generated content provides a large body of information. Fourth, the wisdom of crowds gives rise to new insights. *Living History* seeks to take advantage of these four opportunities.

While technical complexity once intimidated elders from embracing computing technology, new devices such as smart phones and tablets are lowering the barrier to

adoption. Many seniors lack fine motor skills, a necessity for using a computer mouse and keyboard. Tablets operate by touch, offering a more natural interaction for the elderly. Usability tests indicate that a touchscreen reduces movement time for older adults by 35%, while lowering error rates (Findlater, Froelich, Fattal, Wobbrock, & Dastyar, 2013). Tablet computers forgive mistakes and do not require prior knowledge, making them a good tool for the elderly (Alpeyev, Eki, Mukai, & Hesseldahl, 2010;). As seniors adopt tablets, their opportunities to engage in a digital world increase. *Living History* seeks to take advantage of the tablet computer as an easy-to-use system for seniors to participate in intergenerational oral history.

While tablets remove barriers to adopting technology, social networks make connecting with others easier. Whereas geographic distance once dictated the individuals in one's peer group, the Internet has effectively removed this limitation, allowing people to connect with others from any part of the world. A recent comScore research report suggests, "Social networks, which provide platforms for online users to connect, share, and build relationships with others online, have forever altered the lives of individuals, communities and societies all over the world." Social networks boast 1.2 billion active users, reaching 82 percent of the world's online population ("It's a Social World", 2011). Some may argue that social networks are for young people, but research indicates that about 43% of Internet users age 65 and older use social media (Fitzgerald, 2013). In fact, this demographic represents the fastest growing segment among social networking sites (Wilms, 2013). Seniors want to see pictures of their grandchildren, look up old friends, and meet others with similar hobbies (Fitzgerald, 2013). Young and old alike are embracing social networking and actively participating in the "social web," also known

as Web 2.0. *Living History* seeks to connect individuals to one another through a social network couched in intergenerational oral history.

In describing the "social web," Blank and Reisdorf (2012) proclaim, "Web 2.0 has introduced a new dimension to the Internet. It opens opportunities for participation by ordinary users; they can become producers of content in a way that is impossible without the Internet." The authors attribute two primary components to Web 2.0. The first component is the "network effect" or the value of a system that increases as more people participate. The second component is the "platform" or the environments where users can do what they wish (p. 537). While publishing companies were once the dominant force in the production and circulation of media, Web 2.0 is effectively democratizing the media landscape, allowing anyone to contribute. Burgess and Green (2009) refer to these contributions as user-generated content (UGC). Types of user-generated content include blog posts, podcasts, product reviews, photos, and videos. Schweiger and Quiring (2005) classify motivations for producing and sharing UGC into five categories: dispersing information and ideas, self-presentation through messages, maintaining or initiating social content, debating issues within groups, and helping other people who need guidance. These motivations require interaction with an online community or social network. While the public typically views seniors as consumers of digital content rather than producers, they are mistaken. Seniors exhibit a strong desire to create digital artifacts. Researchers suggest that while access is important, it is insufficient in nurturing new social relationships. When provided with an application to express themselves using photographs and messages, elders embraced the opportunity to produce digital content, proving that digital tools can stimulate self-expression and social connection (Waycott et

al., 2013). *Living History* seeks to provide a framework that motivates an online community to produce and contribute user-generated content.

In addition to producing user-generated content, the inclusion of crowds gives rise to new insights. While study of the humanities once required book research and subject matter experts, the internet is effectively changing the way scholars collect, retrieve, and analyze information. Boyd (2012) states, "The most revolutionary aspect of the digital revolution, from an oral history perspective, has been the recent eruption of possibilities for accessing, publishing, and ultimately disseminating oral histories in new, creative, and innovative ways." The participatory nature of Web 2.0 provides fertile ground for the collective recounting of history. When historians write about history, details unavoidably get left out (Mihm, 2008). Collecting recollections of crowds, or "crowdsourcing," generates a more complete picture than a single narrative can provide. While crowdsourcing transforms the gathering and storage of historical materials, the true benefit is the depth and breadth of the understanding attained (Mihm, 2008). Both the Library of Congress and National Archives use crowds to analyze historic photos and documents. Websites like Make History (makehistory.national911memorial.org) and Hurricane Digital Memory Bank (hurricanearchive.org) collect stories, images, and other materials from the public. *Living History* seeks to provoke new insights by providing a vast audience with a large body of historical memoirs.

THREATS

Intergenerational oral history has two key threats. First, online distribution of oral histories can lead to privacy concerns (Larson, 2013). Second, untrained interviewers

may not understand that oral history requires more than common sense (K'Meyer, 1998).
Living History seeks to fend off these threats.

Legal release forms regarding the use of oral history interviews are commonplace.
The agreements transfer the rights to the produced materials to the archives (Larson,
2013). Today, most oral history program agreements allow for future uses including
electronic reproduction and online distribution. While these agreements fulfill the legal
requirements for placing oral histories on the Internet, ethical issues remain. Due to the
longevity of materials placed on the Internet, repercussions for potentially damaging
content may not be clearly understood by participants (Larson, 2013). Some argue that
the interviewer has a responsibility to protect the best interests of the storytellers by
keeping such content private. Others argue that this approach "smacks of paternalism"
when dealing with a competent, consenting adult (Larson, 2013). *Living History* seeks to
protect the privacy of elders with clear terms of use and self-directed, independent action.

An additional concern is that of untrained interviewers who may not understand
that oral history requires more than common sense. To avoid superficial interviews,
students should conduct background research. They should also know how to ask
appropriate questions and interpret findings (K'Meyer, 1998). *Living History* seeks to
help interviewers ask open-ended, thought-provoking questions while providing adequate
background information. Sample questions and questions of others provide a "learning by
example" model.

STRATEGIC RESPONSE

Living History seeks to provide new intergenerational oral history opportunities to
both students and seniors while responding to the SWOT of oral history. Taking

advantage of the strengths of oral history, this application will be narrative, intergenerational, and personal. The application will exhibit stories from elders in a question answer format. Students will be able to ask questions to the elder community in context to specific historical events. The stories that the elders will provide will allow students to experience history in a personal way. Responding to the weaknesses of oral history, this application will be open, asynchronous, sensory-rich, and easy to access. A voluntary, opt-in system will allow elders from all over the world to respond to student questions. They may respond to questions without time constraints using asynchronous forum-style communication. The communication mode will be video messaging, which will retain the tone, volume range, and body language of the elder's story. All videos will be stored on a centralized server, allowing the public to easily access the trove of stories through the Internet. Taking advantage of the opportunities, this application will be easy to use, social, participatory, and insightful. The delivery vehicle for the application will be the user-friendly tablet computer, such as the Apple iPad. Users will interact with one another through an interconnected intergenerational oral history social network. Rather than providing traditional, branded content, the application will allow students and elders to generate the content in a cooperative manner. This user-generated content will provide a wide set of perspectives which allow the public to discover new patterns and revelations. Fending off the threats to oral history, this application will be forthcoming, and instructive. Clear terms-of-use will inform students and elders regarding the usage, storage, and distribution of their submitted content. A question rating system will train students to ask thought-provoking questions as they learn by example.

RELATED WORK

The use of digital technology in the collection, delivery, and exploration of oral

histories is relatively new. A small number of applications and websites explore

intergenerational oral history.

Palaver Tree Online (PTO). Designed by Jason Ellis and Amy Bruckman and

released in 2000, Palaver Tree Online (see Figure A1) is a web application that allows

students to send questions to elders in the form of text messages. Elders provide written

stories and photographs in response. Students then create online projects based on the

information they gather. Elders then provide feedback on the student projects. PTO

includes both student and elder profiles and provides a discussion space for conversations

to take place. While text messaging is the primary communication method in PTO, *Living*

History will use video messaging, a format that preserves nuanced meaning and nurtures

empathy. While PTO is a closed system, *Living History* will be open to the general

public, drawing from a vast pool of potential students and storytellers. While PTO

discussions focus on a specific event or topic specified by the instructor, *Living History*

will support free exploration of many events. PTO supports the creation of online

projects; *Living History* assumes the student will complete project work as a separate

endeavor. PTO is no longer active as of 2013.

Civic Voices Democracy Memory Bank (CVDMB). Civic Voices Democracy

Memory Bank (see Figure A2) collects and archives stories of civic activism. Students

and teachers can then upload their video, transcript, and summary to the Civic Voices

website, where the public can browse and view these oral histories. CVDMB requires

instructors to recruit narrators and schedule interviews in the same manner as traditional

intergenerational oral history, *Living History* will not require recruiting or scheduling. CVDMB focuses on democratic activism, whereas *Living History* will center on historical events. While interviews take place outside of CVDMB, *Living History* will support recording the memoirs within the application itself.

There are several other applications and websites that support oral history activities in general.

Hurricane Digital Memory Bank (HDMB). Released in 2005, the Historical Digital Memory Bank (see Figure A3) allows individuals to submit stories, images, and audio related to Hurricanes Katrina and Rita. The public can browse and search the submitted materials. HDMB does not petition the public to respond to particular questions. The onus is on narrators to determine what type of information they wish to share. *Living History* will allow students to solicit stories from elders through social interaction. This interaction is important, as prior studies indicate that having a specific audience in mind leads elders to customize the content they share (Thiry, Lindley, Banks, & Regan, 2013).

Make History: National 9/11 Memorial. Make History (see Figure A4) allows individuals to submit stories, photos, and videos related to the September 11th attacks. Similar to the HDMB, Make History allows visitors to browse and search the archives. Make History features map and timeline details that provide context to the stories. *Living History* will differ from Make History in the same ways it differs from the HDMB.

Veteran's History Project (VHP). The Veteran's History Project (see Figure A5) collects and archives stories of American war veterans. Individuals can interview American veterans and mail the required forms and interview recording to the Library of

Congress. Like the CVDMB, the VHP requires the interviewer to recruit elders and schedule interviews on their own accord. Additionally, VHP is limited to the accounts of U.S. Veterans, whereas *Living History* will provide memoirs of a larger variety of historical events.

What Was There? (WWT). What Was There (see Figure A6) is a smartphone application and website that allows individuals to upload historical photos, tag them with a date, and place them onto a map. Users can browse the uploaded photos, revealing the photographic history of a location. WWT places primary importance on geolocation and date, whereas *Living History* will emphasize the narratives of individuals who actually experienced historical events.

Broadcastr. Broadcastr (see Figure A7) is a smartphone application that allows individuals to upload memoirs and place them onto a map. Users can browse the uploaded memoirs by location. Broadcastr allows individuals to upload audio recordings on any topic, whereas *Living History* will require contributors to upload memoirs for specific historical events. Broadcastr is no longer active as of 2013.

Sound and Story. Sound and Story (see Figure A8) is a smartphone application and website that allows individuals to upload audio and photos related to the locations in the Hudson River Valley. Users can browse the uploaded recordings by category or geographic location. The recordings are available through the Sound and Story application and website. Similar to Broadcastr, contributors can upload recording on any topic, whereas *Living History* will collect stories regarding specific events.

StoryCorps. StoryCorps (see Figure A9) collects and archives interviews from individuals. Contributors record interviews in soundproof StoryBooths or at home with

the help of StoryCorp coordinators. Archivists store the interviews in the American Folklife Center at the Library of Congress. Selected recording are also available on the StoryCorps website and broadcast weekly on NPR's Morning Edition radio program. StoryCorps does facilitate intergenerational dialogue, but the interviewer and interviewee typically have a familial or social relationship already in place. *Living History* will be less restrictive, allowing students to seek information from a theoretically infinite number of elders. Similar to Broadcastr and Sound and Story, contributors can record memoirs on any topic, whereas *Living History* will use specific events to frame the stories.

CHAPTER III

PHASE II: DEVELOPMENT AND USER RESEARCH

INITIAL INSIGHTS

Early ideation explored four dimensions of *Living History*. These dimensions are

sense of time, sense of place, sense of person, and the intersection of all three.

Brainstorming and sketching led to the idea of using a timeline to visualize the

order of historical events. A timeline allows the audience to understand the chronological

order of events, the elapsed time between events, and the concurrency of two or more

events. Ricoeur (2004) suggests timelines exhibit qualities such as means and end,

suspension and resolution, and problem and solution. The visual nature of timelines

compliments the narrative quality of time. Inspiration included the *Wallchart of World*

History by Edward Hull, the SIMILE timeline developed by David Huynh, and Timeflow

created by Fernanda Viegas and Sarah Cohen. One initial idea placed individual oral

history markers on a timeline based on the event date of each memoir. Unless one has

eidetic memory, however, it is unreasonable to assume that storytellers can provide

specific dates with this level of accuracy. Discussing the psychology of time perception,

Hammond (2012) reports that systematic biases cause individuals to remember recent

events as being more recent and distant events as being more distant. In the revised

approach, a curated list of events provides a fixed number of event markers placed onto

the timeline according to dates recorded in historical texts such as encyclopedias.

Although fixed in place, there are additional opportunities to add dynamic expression to

the event markers. One possibility is to link the size of the marker to the number of

stories recorded for the historical event. Events with the most content would have the largest markers.

Early ideation led to the idea of using a map to visualize the location of historical events. Maps allow the audience to understand the geographic location of places and events. Inspirations includes Google Maps and Foursquare. Both examples attach rich metadata to latitudinal and longitudinal coordinates, describing the buildings and landmarks that reside there. One initial idea placed individual oral histories on a map based on the event location of each memoir. It may be problematic, however, to require elders to remember and locate specific sites on a map. In the revised approach, the curated list of events allows event markers to be placed onto the timeline according to the locations recorded in the historical record. The existing system struggles, however, to cover all event types. For example, one cannot confine geographically diverse events like World War II to a single location. Other events, like the Apollo moon landing do not have a location that a world map can depict. In these cases, it is necessary to identify a representative location on behalf of the wider geography. Possibilities include landmarks such as the location of key battles, capital cities, space centers, and so on.

While timelines and maps provide a macro view of history, creative exploration led to the use of primary sources to provide a more intimate, micro perspective. Inspiration includes autobiographies like *The Diary of Anne Frank* and museum artifact collections like those in the Smithsonian. One initial idea allowed elders to upload photographs in addition to providing oral histories. While this concept is intriguing, the revised approach seeks to minimize complexity by limiting primary sources to oral

histories in the form of short video messages. Prior works include *Skype* and Apple *FaceTime* video calling.

Timelines, maps, and oral histories are powerful tools, but the intersection of all three affords even richer context. Initial thoughts led to the idea of an interconnected timeline, map, and event list. Inspiration includes the Timemap javascript library, which integrates the SIMILE timeline with Google Maps. Zooming into a specific geographic location filters the timeline to reveal the events that took place in the specified region. Likewise, zooming into a specific year filters the map to reveal the locations of significant events in the specified year. In addition, the timeline and map work in concert to filter the event list according to a specific location at a specific point in time.

PERSONAS AND SCENARIOS

The development of personas and scenarios followed the formation of concepts. Personas are fictitious characters that represent target users. Personas communicate characteristics of target users, allowing designers to empathize with those who will make use of the product or service. There are two key personas for *Living History*. Jessica is a 17-year-old high-school student. Paul is a 65-year-old retired electrical worker. Scenarios are fictitious stories that describe the goals, motivations, and actions of the persona as they interact with the product or service. The main scenario describes how Jessica and Paul engage with *Living History*.

PROCESS FLOW DIAGRAM

The development of a process flow diagrams (see Figures B1 and B2) followed the formation of concepts, personas, and scenarios. Process flow diagrams illustrate possible user paths through an application as they make decisions. The preliminary

process flow diagram proposed two separate applications, one for the elder (see Figure

B1) and one for the student (see Figure B2). Such an approach would allow each

workflow to cater to the needs of each persona. User feedback, however, suggested that a

single application could serve the needs of both students and elders, leading to the

combination of both flows in the subsequent process flow diagram. This diagram depicts

two basic paths through the system. The first path is the student's course for selecting a

historical event and submitting a question. The second path is the elder's course for

selecting a historical event, reviewing questions, and submitting a response. The process

flow diagram identified additional supplementary paths, such as editing a user profile.

The process flow diagram facilitated the next stage of the design process by revealing an

inventory of the various screen types requiring form and layout. Four key screen types

identified in the process flow diagram include: the Event Explorer, Question Library,

Answer Library, and the Video Recorder. Ancillary screen types include: Login, Profile,

Inbox, and Favorites.

SKETCHES, WIREFRAMES, AND COMPS

The development of sketches, wireframes (see Figure B3), and comps (see Figure

B4) followed the creation of the process flow diagram. Sketches quickly translate the

concepts and process flow into rough user-interface screen designs. Wireframes further

refine the structure, content, and interactions of each screen. Comps build upon

wireframes, detailing color, graphics, and typography. Although they differ somewhat

from the final screens, sketches and wireframes are useful in uncovering unsettled design

questions that must be resolved by the designer. One such issue was how to visualize the

linkage between questions and answers. Variation and iteration provided multiple options for answering this question.

PROTOTYPE

The development of a prototype (see Figure B5) followed the creation of sketches, wireframes, and comps. Prototypes are rudimentary models that demonstrate form and function in order to elicit feedback. Prototypes allow representative users of an application to articulate and to act on their assumptions in the user-interface. Evaluation of the prototype guided refinements for the final design outcome, which was subsequently tested with an exploratory group of participants.

USER FEEDBACK

Three activities: usability testing of a paper prototype, a focused discussion, and written questionnaire generated user feedback (see Appendix C). Activities targeted two distinct user groups: students and elders. Each group consisted of four participants, for a total of eight participants. While the sample size is relatively small, the preliminary feedback from this exploratory group can inform broader, more comprehensive feedback sessions in the future.

Usability Testing

A paper prototype facilitated usability testing. Participants were asked to complete a task by interacting with the printed screens. As they completed each task, participants were asked to "think aloud," describing their expectations for each screen. Students were asked to record a question related to the Apollo Moon Landing, while elders were asked to view questions related to the Apollo Moon Landing and submit a video response.

Four out of four students (100%) were able to successfully complete the assigned task using the paper prototype. Three out of four elders (75%) were able to successfully complete the task. Both students and elders understood the relationship between event list, map, and timeline on the event explorer screen. One student was initially uncertain how to access stories related to a question but was eventually able to access them with further exploration. Three out of four student participants (75%) remarked on the search bar, indicating interest in the ability to search for specific events. Two out of four elders (50%) believed that the Share action would allow them to record a story, rather than share the video to a social network. They were able to successfully locate the Add icon in a second attempt. The elder requiring assistance remarked that an introductory screen would eliminate any confusion. Students had the easiest time completing their task, while the elders struggled a bit more. These findings suggest that students may have a natural aptitude with touchscreen devices, whereas elders require more explicit guidance and precise labels.

Focused Discussion

Focused discussion provided feedback related to the anticipated cognitive effects of the application. Students were asked to read and respond to a short paragraph about the Greensboro Sit-Ins of the Civil Rights Movement. Subsequently, students were asked to view and respond to a short oral history video about the same event. Elders were asked to recount a personal experience associated with a historical event. They were then asked to describe the emotions they experienced describing the event.

Results from the focused discussion with students align with the strategic goals of *Living History*. A qualitative analysis of responses indicates that students were able to

relate to the oral history in a more emotional and personal way than to a text on the same subject. In reference to the video, students made comments indicating engagement, such as "bold statements stuck with me," and "I could relate more to the video [than to the text]." Other remarks, such as "it [racial segregation] could have been passed down to my generation" indicate empathy, revealing that the participant comprehended the story in light of her own experience. This focused discussion suggests that students perceive oral history as a very personal and emotional way to learn and discover.

Results from the focused discussion with elders also align with the strategic goals of *Living History*. Elders enjoyed recounting experiences and were able to discuss historical events in a personal, biographical way. Statements such as, "Events are put into context after time has passed," and, "If it could happen in 1960, it could happen now," demonstrate that elders understand history as an ever-evolving continuum that shapes their understanding of the present.

Written Questionnaire

A written questionnaire provided quantitative metrics for the application. These metrics include level of familiarity with touchscreen devices, level of interest in the application, and satisfaction with ease of use.

Results from the student questionnaire validate the outcomes provided by the usability tests. Four out of four students (100%) indicated very frequent use of touchscreen devices. Four out of four students (100%) strongly agreed that they would enjoy asking elders questions and viewing responses. Four out of four (100%) strongly agreed that the application was easy to use. Results from the questionnaire reveal that the touchscreen device is a familiar and appropriate platform for *Living History;* that there is

significant interest in the application; and that students found the application easy-to-use, denoting a positive first-use experience.

Results from the elder questionnaire also support the outcomes provided by the usability tests. Four out of four elders (100%) indicated very frequent use of touchscreen devices. Four out of four elders (100%) strongly agreed that they would enjoy responding to student questions about historical events. Four out of four elders (100%) agreed somewhat that the iPad application was easy to use. Stronger agreement may be achieved through a guided welcome experience and more specific labels.

Additional Feedback

In addition to the usability testing, focused discussion, and written questionnaire, participants provided additional observations and suggestions. One elder was apprehensive about providing a video due to a recent facial surgery. He preferred a method for entering text and uploading photos. In another instance, an elder declined to participate due to poor eyesight. This situation may, however, be an opportunity for family members to assist the elder, creating an additional opportunity for intergenerational teamwork.

CHAPTER IV

DESIGN OUTCOME: LIVING HISTORY

EVENT EXPLORER

The event explorer (see Figure 1) allows students and elders to explore historical events using an event list, map, and timeline. The event list contains a curated list of historical events, each with associated keyword tags. The map features graphical bubbles placed at various locations, corresponding to these events. The timeline features markers at various locations along the timeline, also corresponding to the events. The panels are inner-connected and respond to one another. In other words, if the user selects an event row, the corresponding map bubble and timeline marker glow (see Figure 2). Likewise, if the user selects a map bubble, the corresponding event row and timeline marker glow. Furthermore, if the user selects a timeline marker, the corresponding event row and map bubble glow. To focus on a specific theme, the user can filter the events by entering a keyword into the search field. Filtering allows users to easily spot theme-related geographic and temporal patterns. When the user taps an event row, timeline marker, or map bubble, a popover appears, allowing the user to navigate to the event's question library on a subsequent screen.
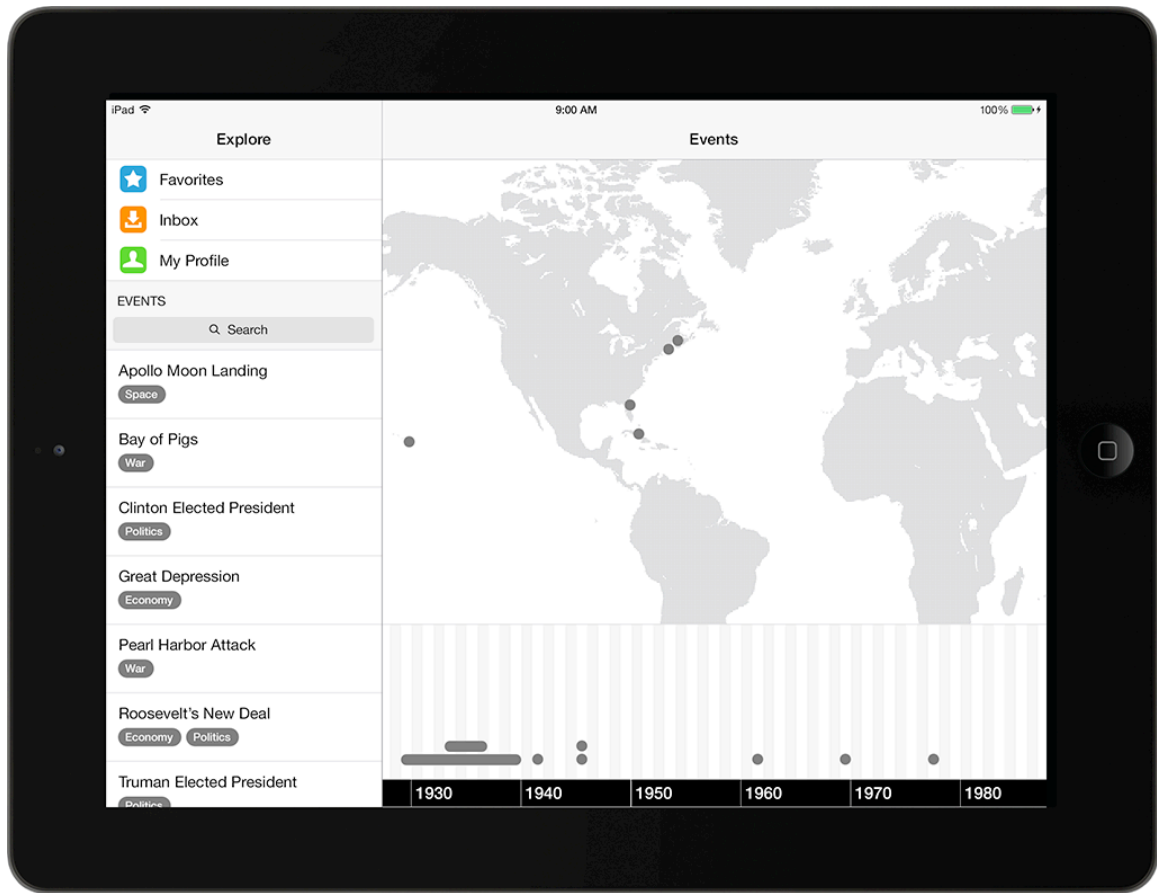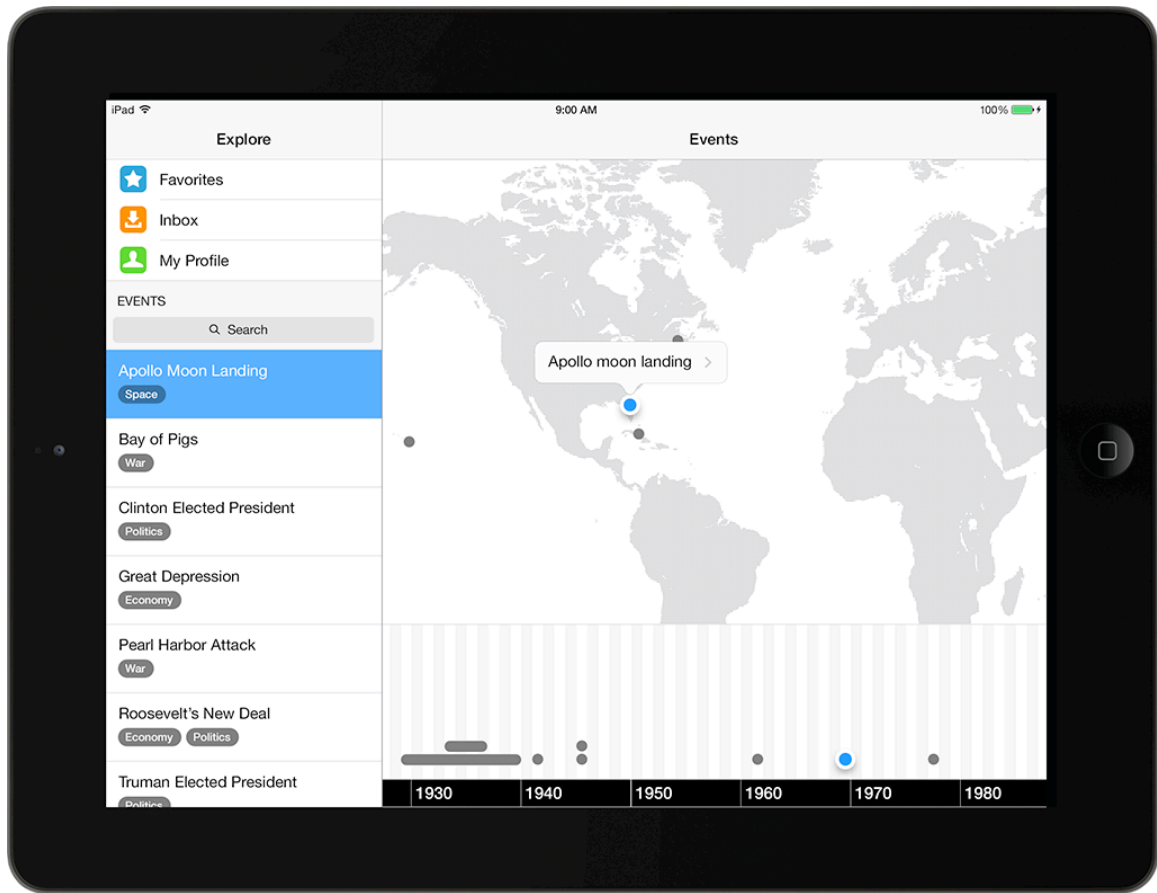
Figure 1. Event explorer.

Figure 2. Event explorer with popover.

QUESTION LIBRARY

The question library (see Figure 3) allows students and elders to browse event-related question videos. In addition, students can add new questions to the library. Each question video displays the interviewer's name, a textual version of the question, and an icon to access related actions. Tapping on a video causes it to play. Tapping on the interviewer's name opens the interviewer's profile page. Tapping on the related-actions icon presents a menu of relevant functions, including:

- View Stories: opens the answer library for the selected question.

- Add to Favorites: adds the question video to the user's favorites library.

- Share: allows the user to share the video interview with various social networks.

- Flag Inappropriate: sends the content owner an alert to review the video and
  withdraw it from the system if necessary.
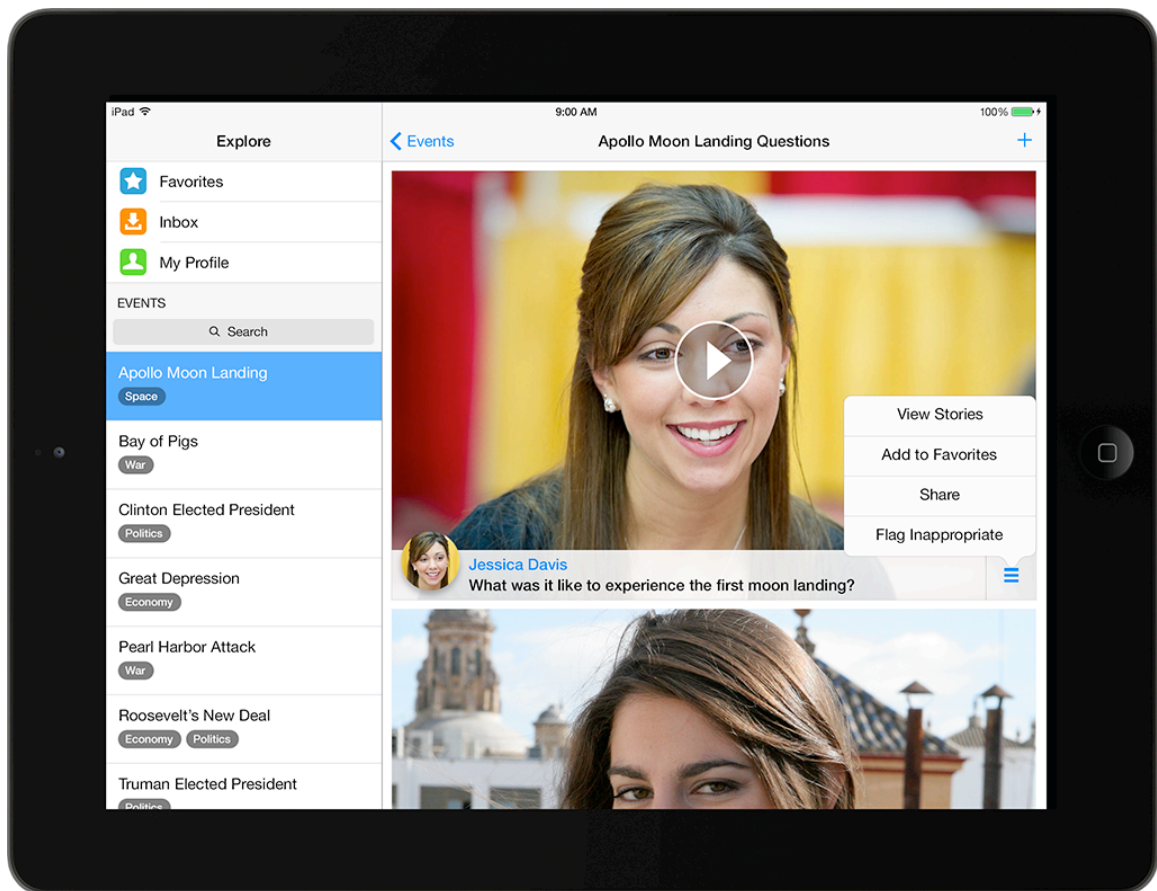
Figure 3. Question library with menu.

ANSWER LIBRARY

The answer library (see Figure 4) allows students and elders to browse question-
related answer videos. In addition, elders can add new responses to the library. Each
answer video displays the interviewer's name and an icon to access related actions.
Tapping on a video causes it to play. Tapping on the elder's name opens the elder's

profile page. Tapping on the related-actions icon presents a menu of relevant functions, including:

- Add to Favorites: adds the answer video to the user's favorites library.

- Share: allows the user to share the video interview with various social networks.

- Flag Inappropriate: sends the content owner an alert to review the video and withdraw it from the system if necessary.
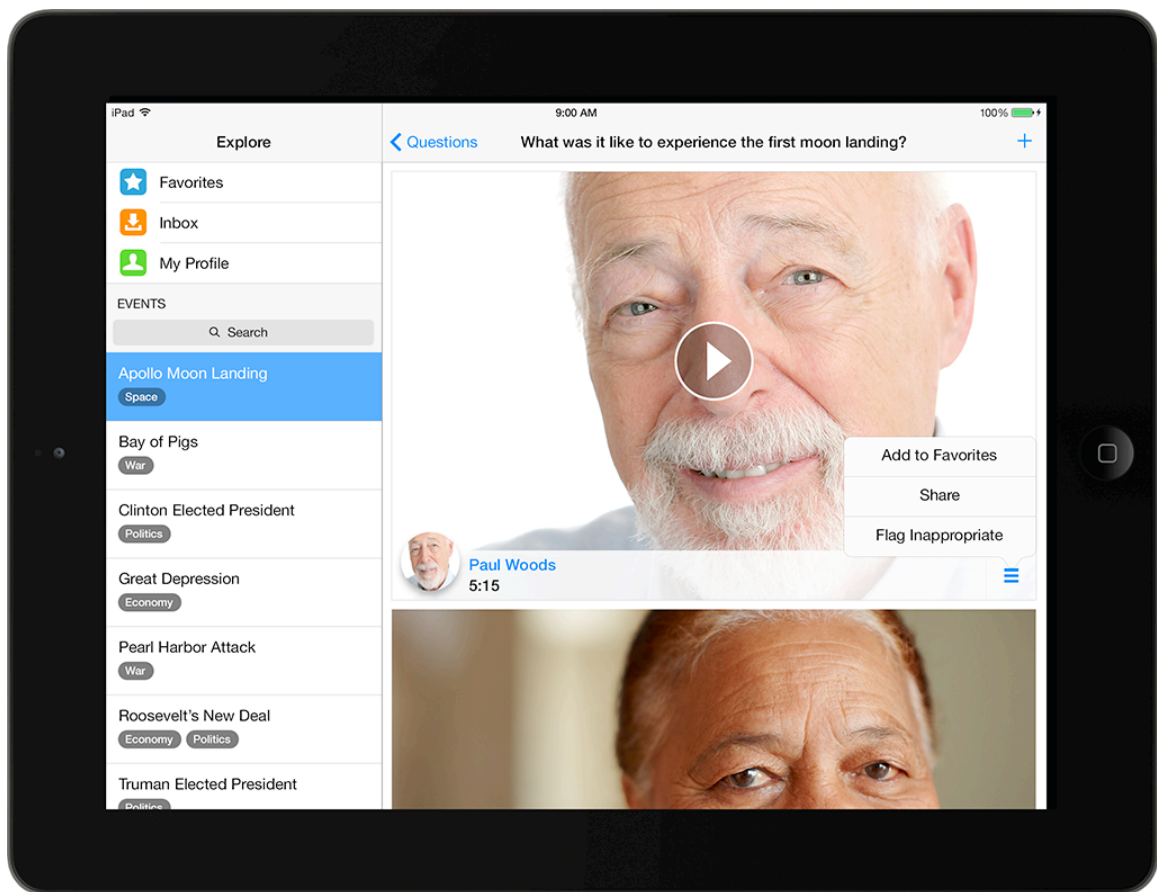

Figure 4. Answer library with menu.

VIDEO RECORDER

The video recorder screen allows students to record questions when accessed from the question library. It allows elders to record responses when accessed from the answer library. Tapping the record button instructs the tablet to begin recording. Tapping the record button a second time instructs the tablet to stop recording. When recording, the tablet will transcribe dialogue using voice recognition technology. After the recording is complete, a menu appears displaying a list of relevant functions including:

- Review: plays the video back to the user.

- Record Again: discards the recording.

- Submit: adds the recorded video to the question or answer library.

- Cancel: exits the video recorder and returns the user to the previous screen.

LOGIN

The login screen allows individuals to log into the application. Users who are not logged in can still browse events and view questions and answers, but they cannot mark favorites, submit questions, or provide answers. A separate registration screen allows unregistered users to establish a user name and password. They must also select the role of student or storyteller.

PROFILE

The profile screen (see Figure 5) displays biographical information about the student or elder. If the user is viewing his own profile, clicking the Edit action will allow him to edit his information.

This information includes:

- Profile Picture: a static image of the user.

- User Name: the name of the user.

- Role: designation of the user as student or storyteller.

- Location: the geographic location of the user (optional).

- Generation: the birth generation of the user (optional).

- Bio: biographical information about the user (optional).

- Ask Me About: short list of events designated by a storyteller as areas of experience (storyteller role only).

- Stories: the number of stories recorded by the storyteller, with access to the video responses (storyteller role only).

- Questions: the number of questions recorded by the student, with access to the questions (student role only).
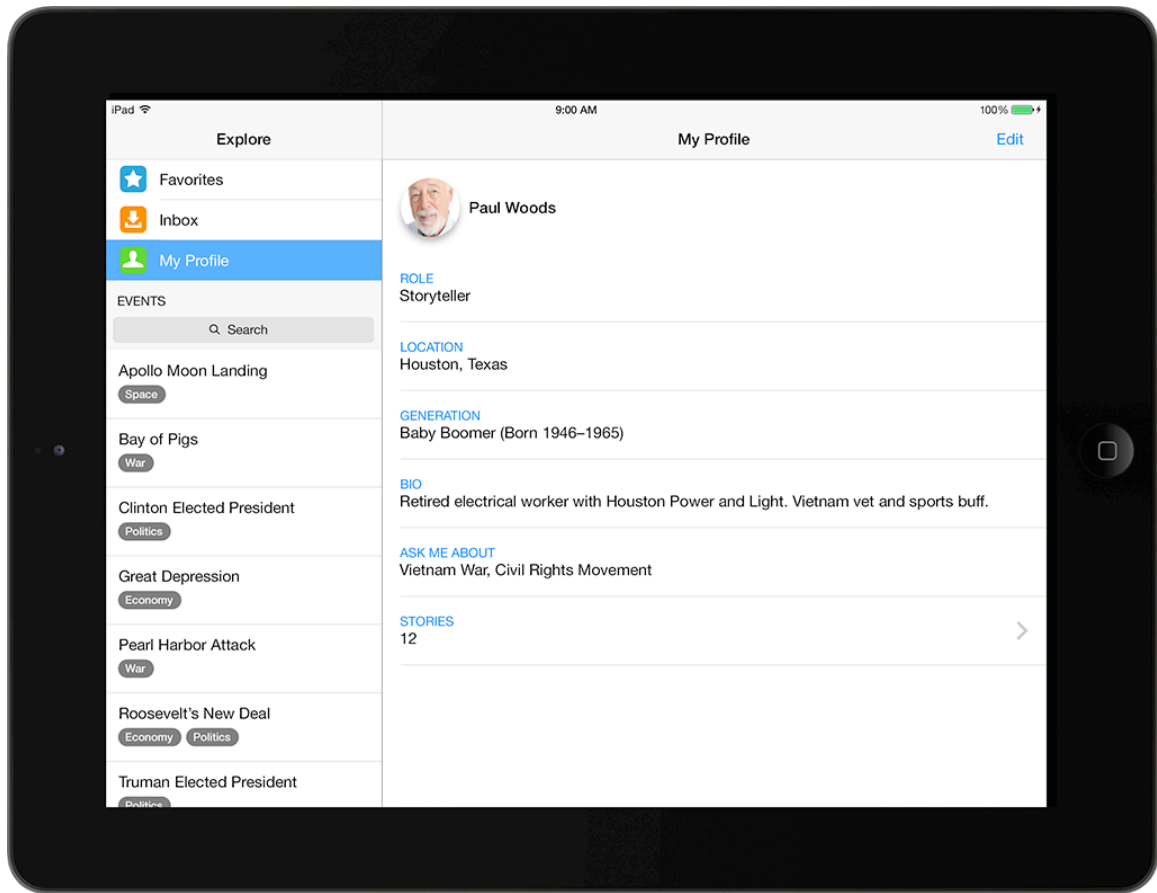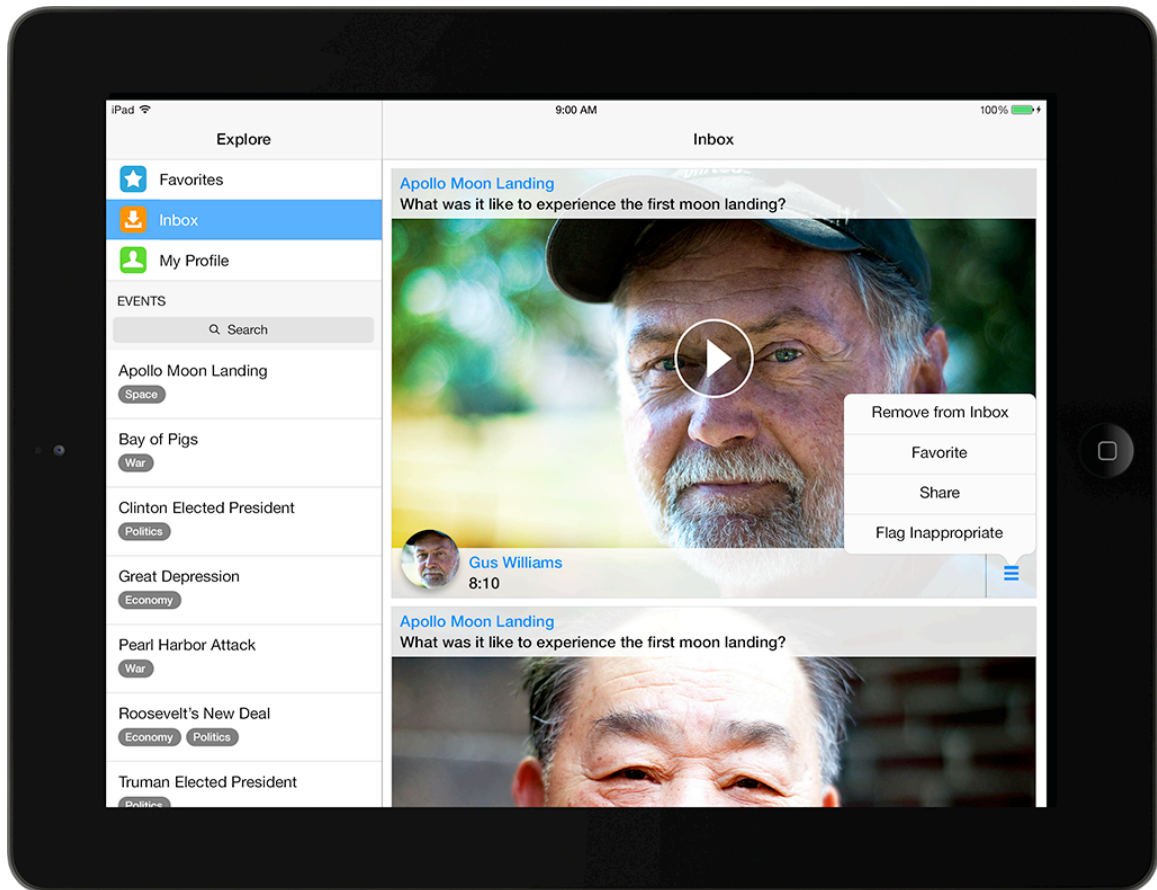
Figure 5. Profile.

INBOX

The inbox (see Figure 6) allows students to review the responses to their questions in one location. Each answer video displays the interviewer's name and an icon to access related actions. Tapping on a video causes it to play. Tapping on the related-actions icon presents a menu of relevant functions, including:

- Remove from Inbox: removes the video from the inbox.

- Favorite: adds the answer video to the user's favorites library.

- Share: allows the user to share the video interview with various social networks.

- Flag Inappropriate: sends the content owner an alert to review the video and withdraw it from the system if necessary.

Figure 6. Inbox with menu.

FAVORITES

Favorites (see Figure 7) allows students to review their favorite question and answer videos in one location. Each question video displays the interviewer's name, a textual version of the question, and an icon to access related actions. Each answer video displays the interviewer's name and an icon to access related actions. Tapping on a video

causes it to play. Tapping on the related-actions icon presents a menu of relevant

functions, including:

- Remove from Favorites: removes the video from the user's favorites library.

- Share: allows the user to share the video interview with various social networks.

- Flag Inappropriate: sends the content owner an alert to review the video and

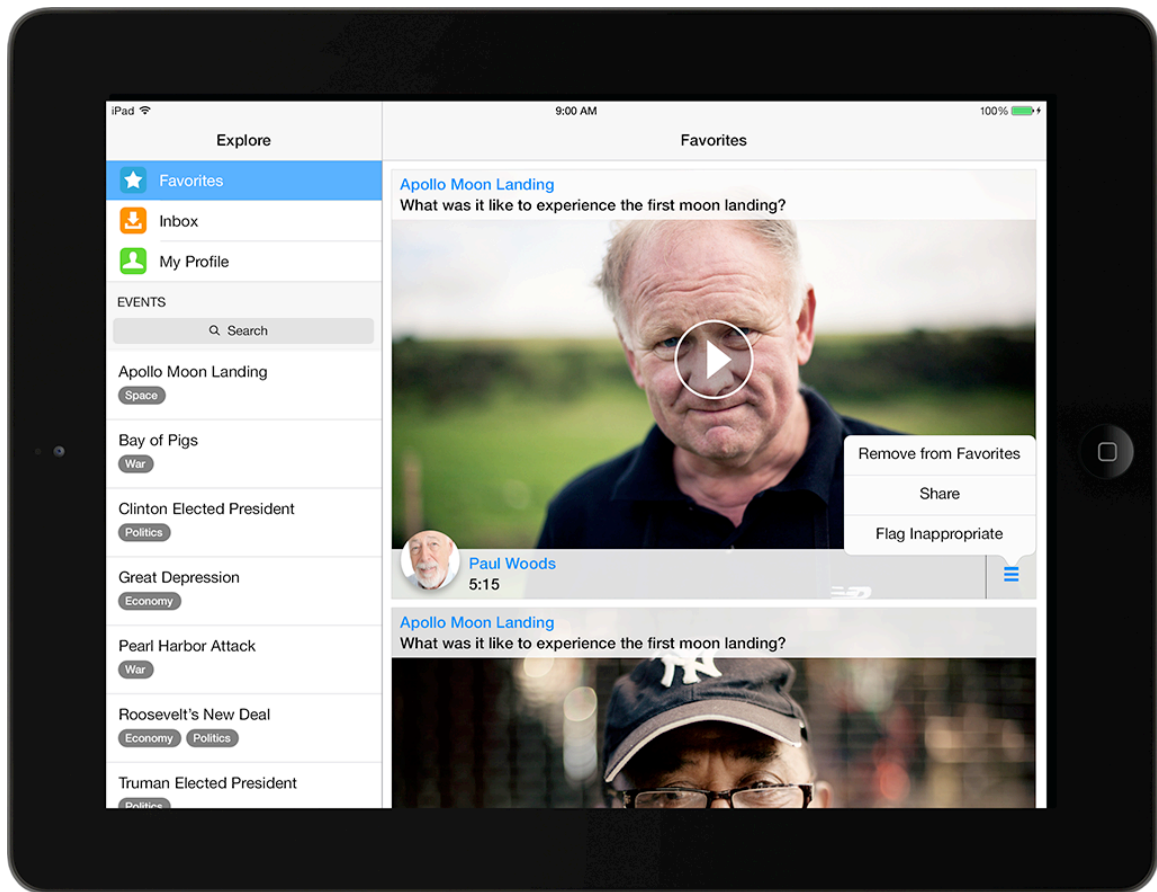   withdraw it from the system if necessary.

Figure 7. Favorites with menu.

CHAPTER V

FUTURE RESEARCH

There are several aspects of *Living History* that are ripe for further research. Three areas for future investigation include application administration, customization, and data analysis.

APPLICATION ADMINISTRATION

Living History limits the amount of control users have over the system. A fixed event list requires a content owner to add new events to the system. An alternate instantiation allows users to create new events. Such an approach, however, may potentially result in duplicate events, misspellings, and other types of list clutter. A hybrid option allows users to submit new events for a content owner to review. The content owner evaluates the proposed event and makes it available to the general public if it meets quality standards. Another instantiation allows users to tag events and videos with keywords providing greater searching and browsing flexibility, though the freedom to tag events and videos with keywords raises the same concerns.

CUSTOMIZATION

Living History allows users to submit memoirs for specific historical events. Some, however, may wish to discuss subjects outside these boundaries. An alternate instantiation allows a community of users to customize the system according to their own interests. In this scenario, organizations like universities and service clubs curate their own list of events or topics in a closed, private system. This allows the organization to capture regional and local community knowledge. If, however, one cannot easily ascribe

a date and time to the topic, the timeline and map views are of little use, suggesting the need for additional visualization techniques or other engaging entry points into the content.

DATA ANALYSIS

Living History allows users to browse memoirs by event, location, and date. A wealth of information, however, lies dormant within the videos. Surfacing this information through automated transcription and text analytics allows videos to be connected and organized in insightful ways. Additionally, providing a dedicated space for analysis and note taking allows students to synthesize their research into new findings.

PUBLIC AWARENESS

Living History relies on public involvement to be successful. Determining the right marketing approach is critically important. Partnering with local and global organizations, including museums and universities is one promising avenue. *Living History* must also have rich, compelling content to sustain interest. Featuring a celebrity storyteller each month could attract a new audience beyond the halls of academia. Curated content could also be distributed through other media outlets. Television networks like The History Channel offer an established community of viewers who may also be interested in *Living History* content. Additional marketing opportunities should be identified and evaluated.

CHAPTER VI

CONCLUSION

Two problems facing society today include disengaged students and isolated senior citizens. Disengaged students suffer from poor academic performance, while isolated senior citizens suffer from feelings of uselessness. The perception of irrelevant curriculum in the history classroom is one factor that inhibits learning; in order to combat this, stories can forge meaningful, personal connections between students and the subject matter. One source of such stories is the elderly population. While society once regarded elders as mentors, changes in the last century left many senior citizens feeling a lack of self worth. Restoring elders as mentors can provide them with a meaningful social role. Intergenerational oral history provides a valuable framework for connecting students and elders.

While there are many strengths of intergenerational oral history, there are also weaknesses. *Living History* takes advantage of digital technology to capitalize on the strengths while addressing the weaknesses. The design of the application followed a two-phase approach consisting of investigation followed by an iterative cycle of creation, evaluation, and refinement. The design outcome allows students and elders to explore historical events using an interactive event list, map, and timeline. After selecting an event, they can review existing questions and students can submit a new question related to the event. Students and elders can also view responses to the posted questions and elders can submit a new response. User feedback from usability testing, focused discussion, and written questionnaires indicates that students and elders are comfortable

with using touchscreen devices. Students were mindful of the advantages of oral history when compared to written history, while elders enjoyed sharing memories and relating past experiences to the present. Both students and elders found *Living History* to be easy to use, although some elders struggled with aspects of the menu system. Several areas for further investigation include application administration, customization, data analysis, and public awareness.

The initial intent of *Living History* is to allow students and elders to mutually benefit from intergenerational oral history. *Living History*'s ability to engage students academically and its capacity to establish older adults as mentors is promising, but its potential reaches beyond to these ambitions. *Living History* could appeal to a broad range of audiences, both local and global. Elements of chronology, geography, narrative, and participation provide a diverse mix of features for anyone to explore. Every person's story is unique, but collectively, these stories make up our shared cultural identity. Stories are evidence of the ideas and beliefs of society as it interprets the world. Stories are the lens through which man can look back in time to find his way forward.

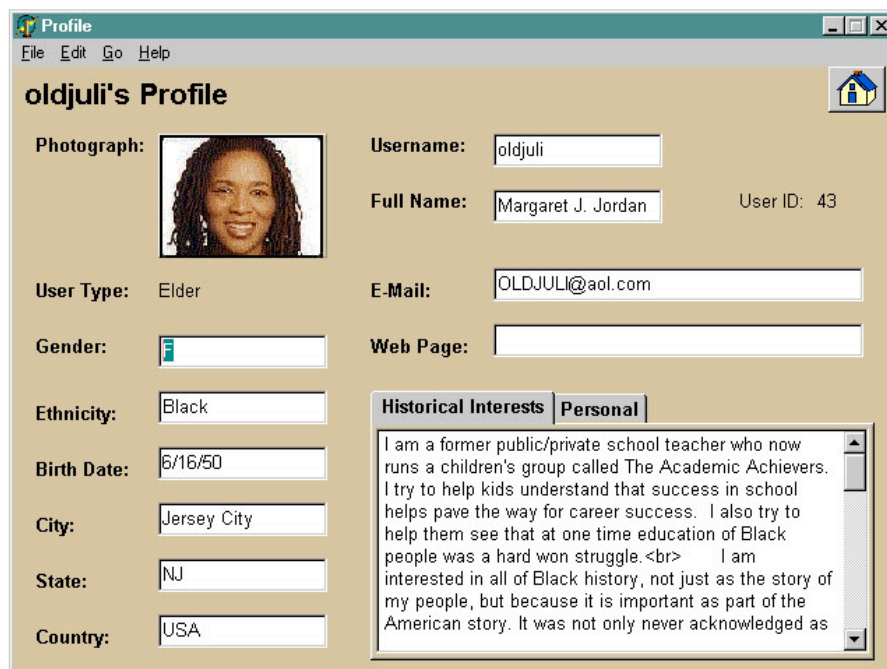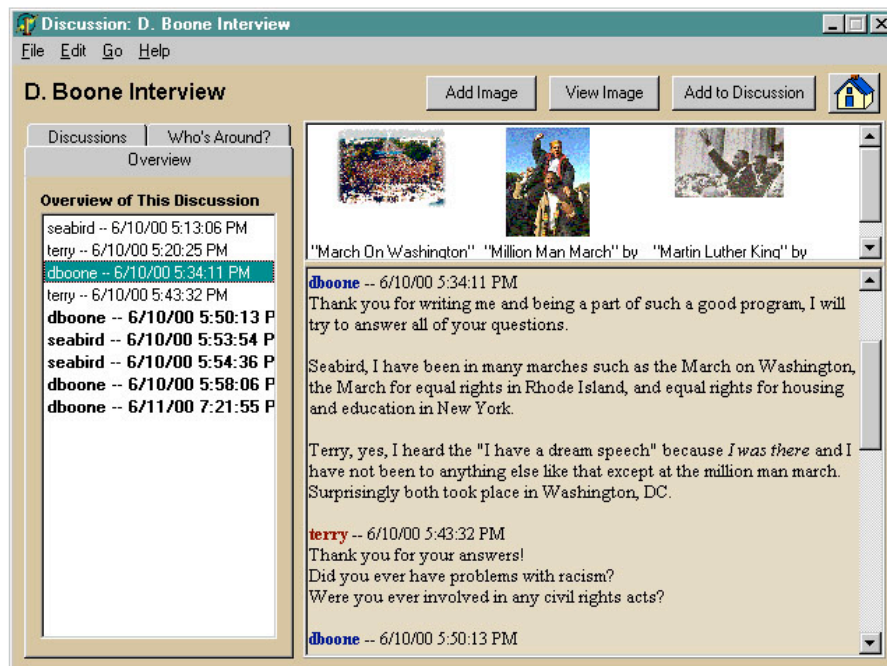**APPENDIX SECTION**

APPENDIX A

AUDIT OF RELATED WORK

Discussion: D. Boone Interview

File Edit Go Help

D. Boone Interview   Add Image   View Image   Add to Discussion

Discussions | Who's Around?
Overview

Overview of This Discussion

seabird -- 6/10/00 5:13:06 PM
terry -- 6/10/00 5:20:25 PM
dboone -- 6/10/00 5:34:11 PM
terry -- 6/10/00 5:43:32 PM
dboone -- 6/10/00 5:50:13 P
seabird -- 6/10/00 5:53:54 P
seabird -- 6/10/00 5:54:36 P
dboone -- 6/10/00 5:58:06 P
dboone -- 6/11/00 7:21:55 P

"March On Washington" "Million Man March" by   "Martin Luther King" by

dboone -- 6/10/00 5:34:11 PM
Thank you for writing me and being a part of such a good program, I will try to answer all of your questions.

Seabird, I have been in many marches such as the March on Washington, the March for equal rights in Rhode Island, and equal rights for housing and education in New York.

Terry, yes, I heard the "I have a dream speech" because *I was there* and I have not been to anything else like that except at the million man march. Surprisingly both took place in Washington, DC.

terry -- 6/10/00 5:43:32 PM
Thank you for your answers!
Did you ever have problems with racism?
Were you ever involved in any civil rights acts?

dboone -- 6/10/00 5:50:13 PM

Profile

File Edit Go Help

oldjuli's Profile

Photograph:

Username: oldjuli

Full Name: Margaret J. Jordan   User ID: 43

User Type: Elder

E-Mail: OLDJULI@aol.com

Gender: F

Web Page:

Ethnicity: Black

Birth Date: 6/16/50

City: Jersey City

State: NJ

Country: USA

Historical Interests | Personal

I am a former public/private school teacher who now runs a children's group called The Academic Achievers. I try to help kids understand that success in school helps pave the way for career success. I also try to help them see that at one time education of Black people was a hard won struggle.
     I am interested in all of Black history, not just as the story of my people, but because it is important as part of the American story. It was not only never acknowledged as
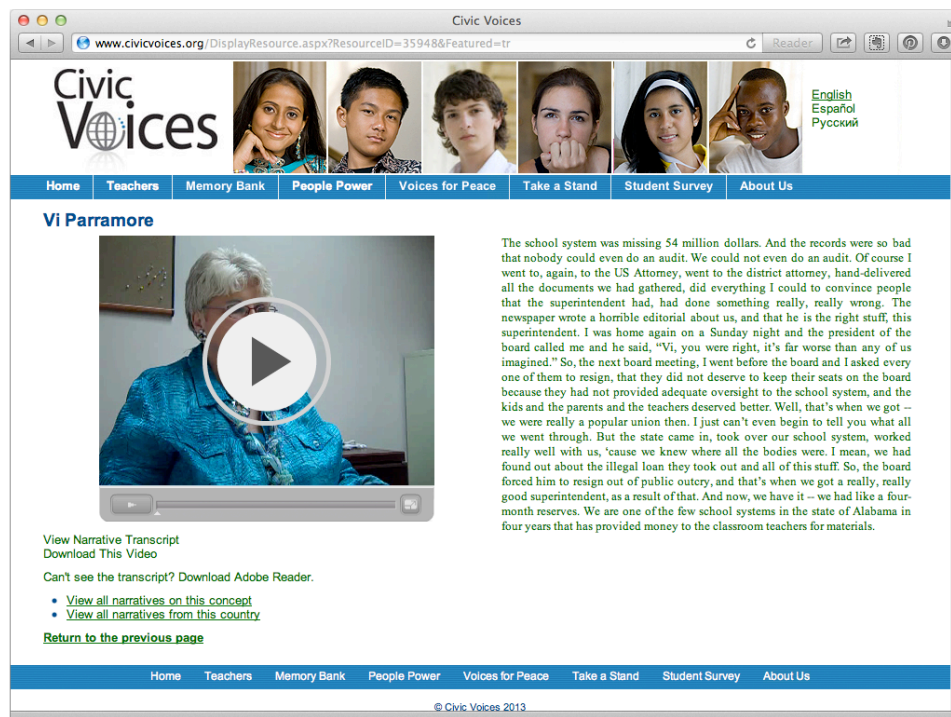
Figure A1. Palaver Tree Online.

44

Figure A2. Civic Voices Democracy Memory Bank.

Figure A3. Hurricane Digital Memory Bank.

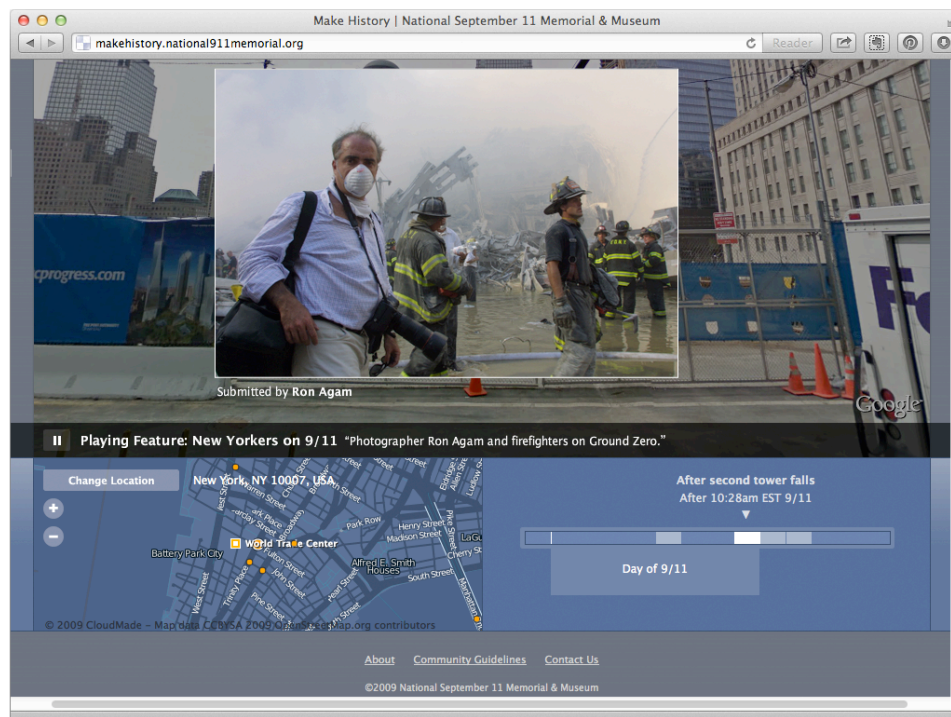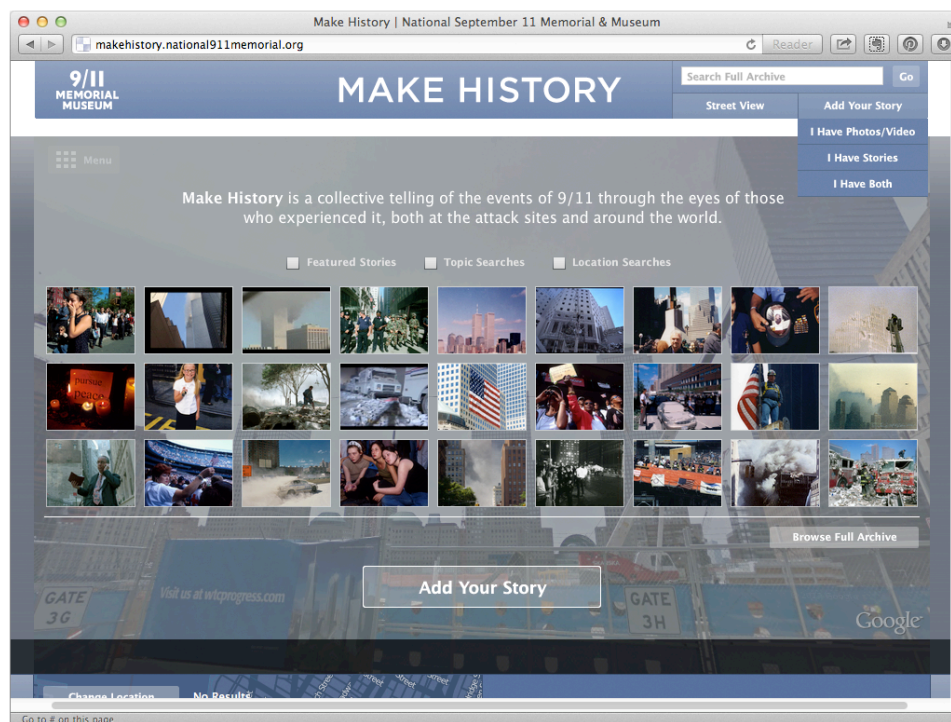*Figure A4*. Make History: 911 Memorial.

Figure A5. Veteran's History Project.
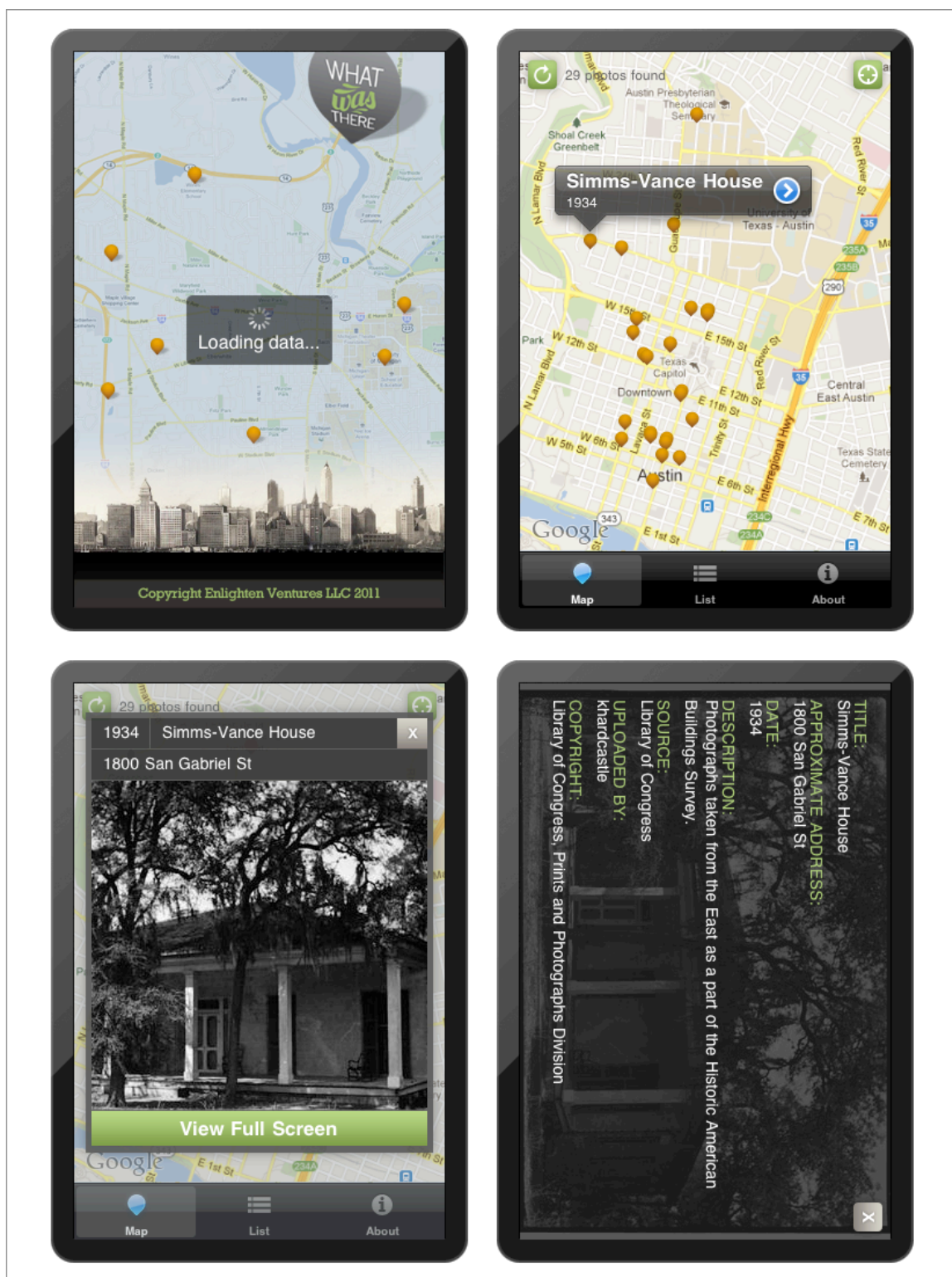
Figure A6. What Was There?

Figure A7. Broadcastr.
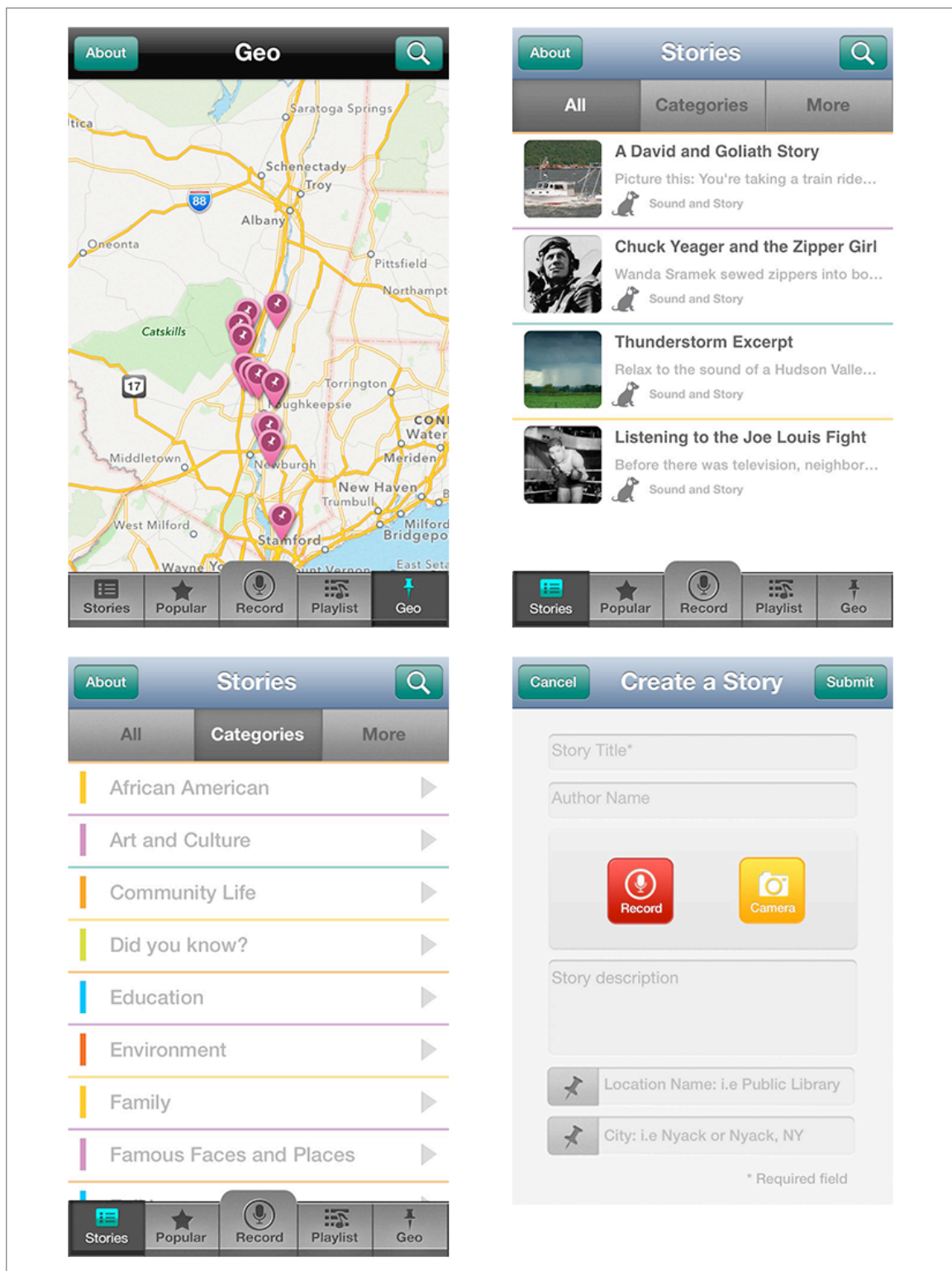
Figure A8. Sound and Story.

Figure A9. Storycorps.

Category	Feature	Palaver Tree Online	Civic Voices Democracy Memory Bank	Hurricane Digital Memory Bank	Make History: 911 Memorial	Veteran's History Project	What Was There?	Broadcastr	Sound and Story	Storycorps
Authoring Method	Self-Authored			●	●		●	●	●	
	Interviewed	●	●			●			●	●
Media Formats Supported	Text	●	●	●	●	●		●		
	Video		●		●					
	Audio					●		●	●	●
	Images	●		●	●	●	●	●	●	
Social Media Features	User Profiles	●			●			●		
	Content Sharing				●	●		●	●	●
	Activity Feed / Dashboard							●		
	Follow / Subscribe							●		
	Comment	●						●		
Content Curation Features	Flag				●			●	●	
	Rate							●		
	Favorites							●	●	
	Notes									
Content Discovery Features	Map		●	●	●		●	●	●	
	Timeline				●					
	Search		●	●	●	●		●	●	
	Tags		●	●	●		●			
Platforms	Web	●	●	●	●	●	●		●	
	iPhone				●			●	●	●
	iPad									

Figure A10. Feature audit.

APPENDIX B

PROCESS WORK

S: Introduction Video

Start Over

Tap Screen   Resume Video

S: Introduction Video Pop-Up

Skip Ahead or
Video Finishes
Playing

S: Storyteller Main Menu   Listen to a Story   About Me

Tell a Story

S: Select an Event Menu   Select an Event
by Name

Select an Event
by Date

S: Date List   S: Event List

1960

S: Event List

Woodstock

Start Over   S: Story Prep Video   Woodstock

Resume Video   Tap Screen

S: Story Prep Video Pop-Up

Skip Ahead

S: Question List

What is your
favorite memory
from
Woodstock?

S: Question Video

Select a
Different
Question   Tap Screen

S: Question Video Pop-Up

Skip Ahead

S: Recording Main Menu

Start Recording   Redo Recording

S: Recording in Progress

Stop Recording

Save Recording   S: Recording Confirmation

Preview
Recording   Skip Ahead

S: Recording Saved   S: Recorded Video

Start Over or   Tap Screen
Resume

1   S: Recorded Video Pop-Up

S: Find a Story Menu   Find a Story by
Name

Find a Story by
Date

S: Date List   S: Event List

1960

Woodstock

S: Story List

What is your
favorite memory
from
Woodstock?

S: Recorded Video

Start Over or   Tap Screen
Resume

S: Recorded Video Pop-Up

Skip Ahead

S: Story Connections   Ask the   Bookmark this   More Stories
Storyteller a   Story   from this
Question   Storyteller

Return to Menu

1   2   3

S: Story List

What is your
favorite memory
from
Woodstock?

S: Recorded Video

Tap Screen   Start Over or
Resume

Skip Ahead   S: Recorded Video Pop-Up

My Bookmarks   S: About Me Menu   My Profile

My Stories

S: Story List   S: My Story List   S: Edit My Profile

Edit My Profile   Save / Cancel

S: Edit My Profile

What was your   What was your
favorite memory   favorite memory
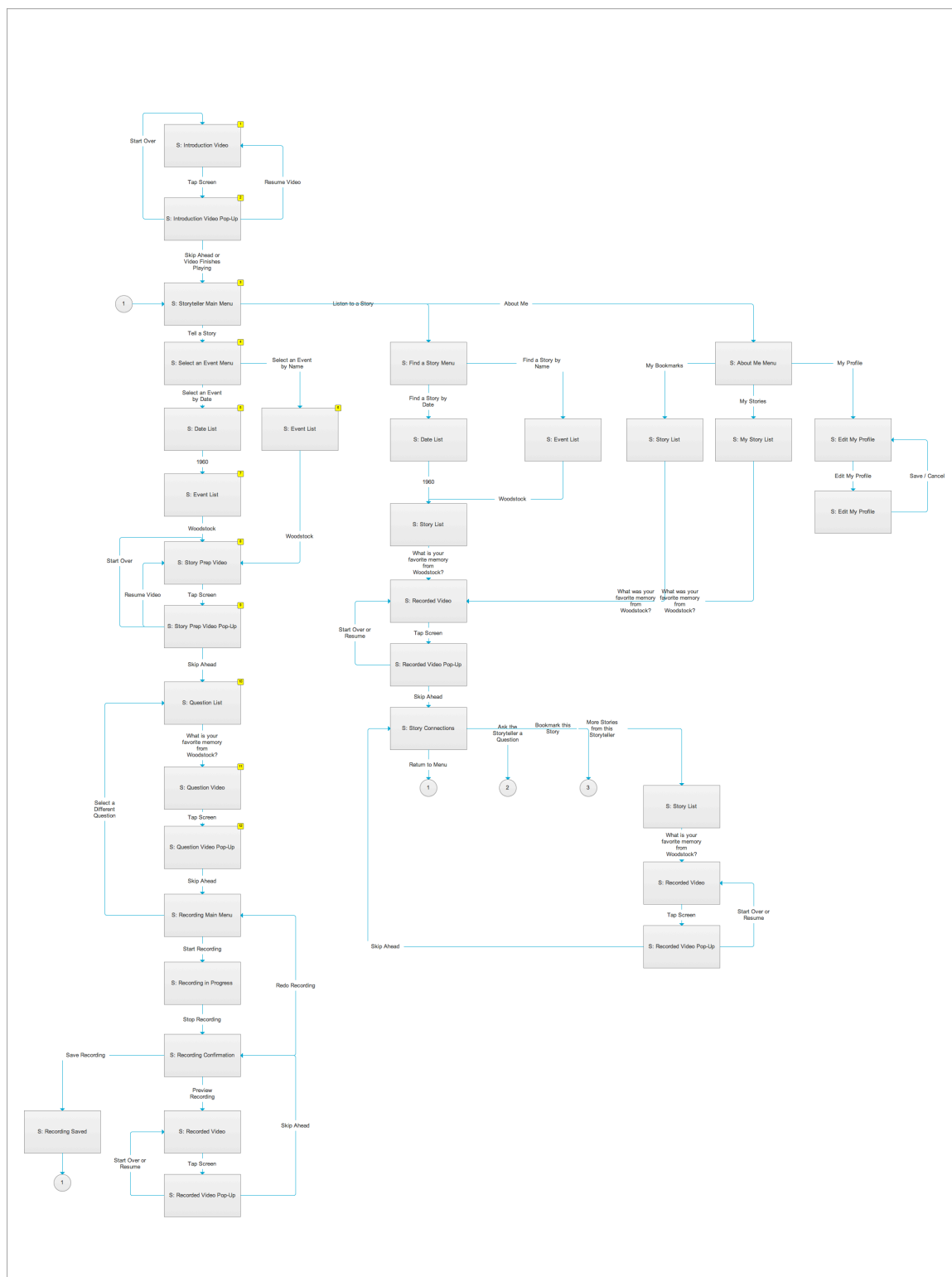from   from
Woodstock?   Woodstock?
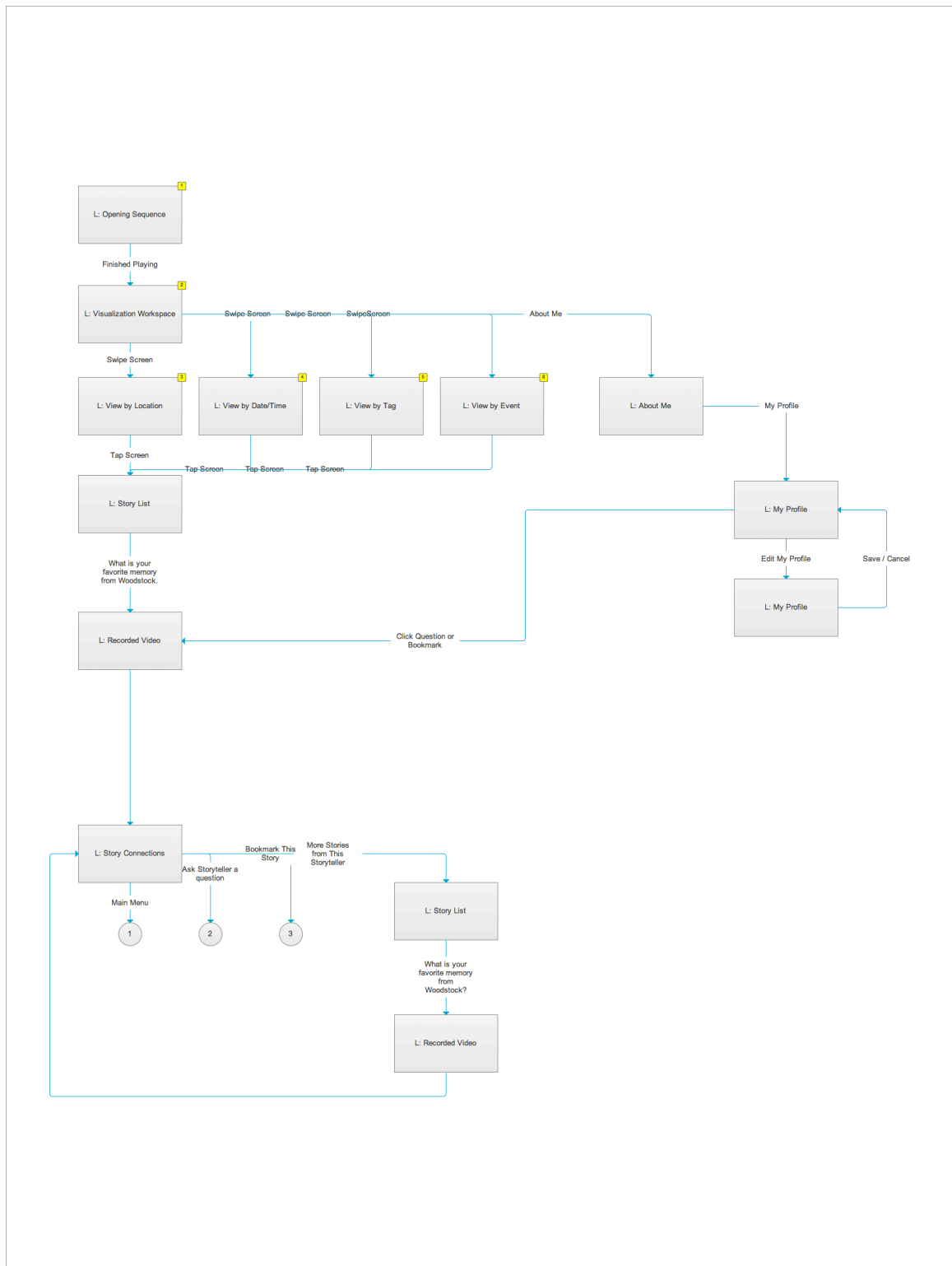
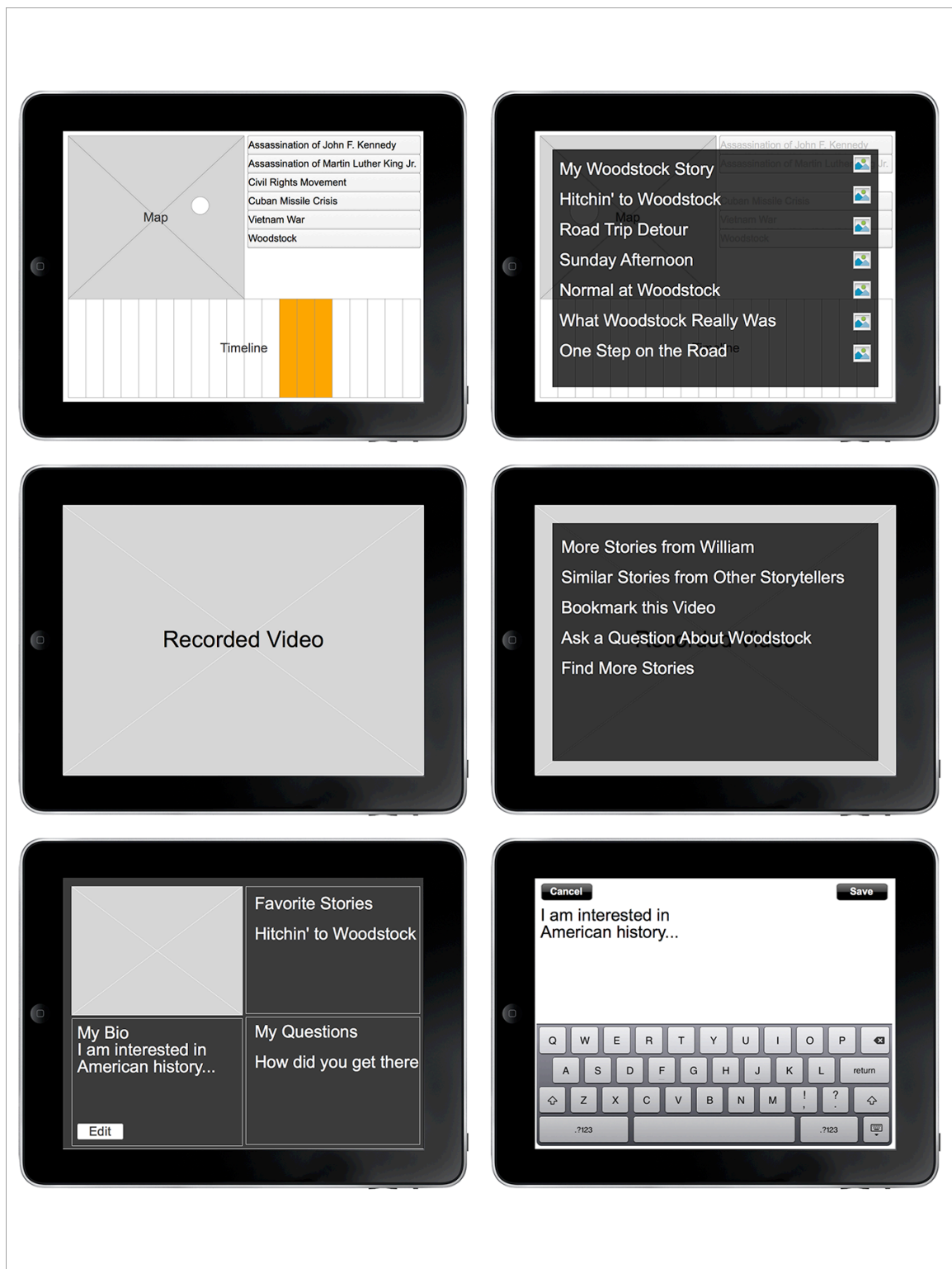*Figure B1*. Preliminary process flow diagram (elder).

55

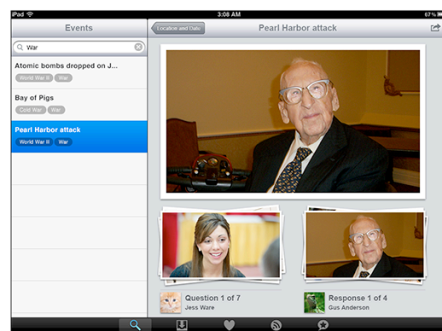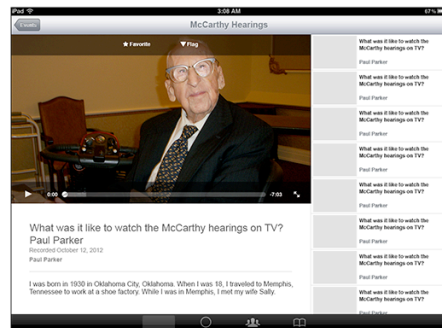*Figure B2*. Preliminary process flow diagram (student).

Figure B3. Preliminary wireframes.

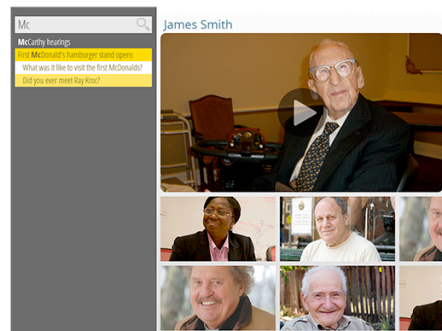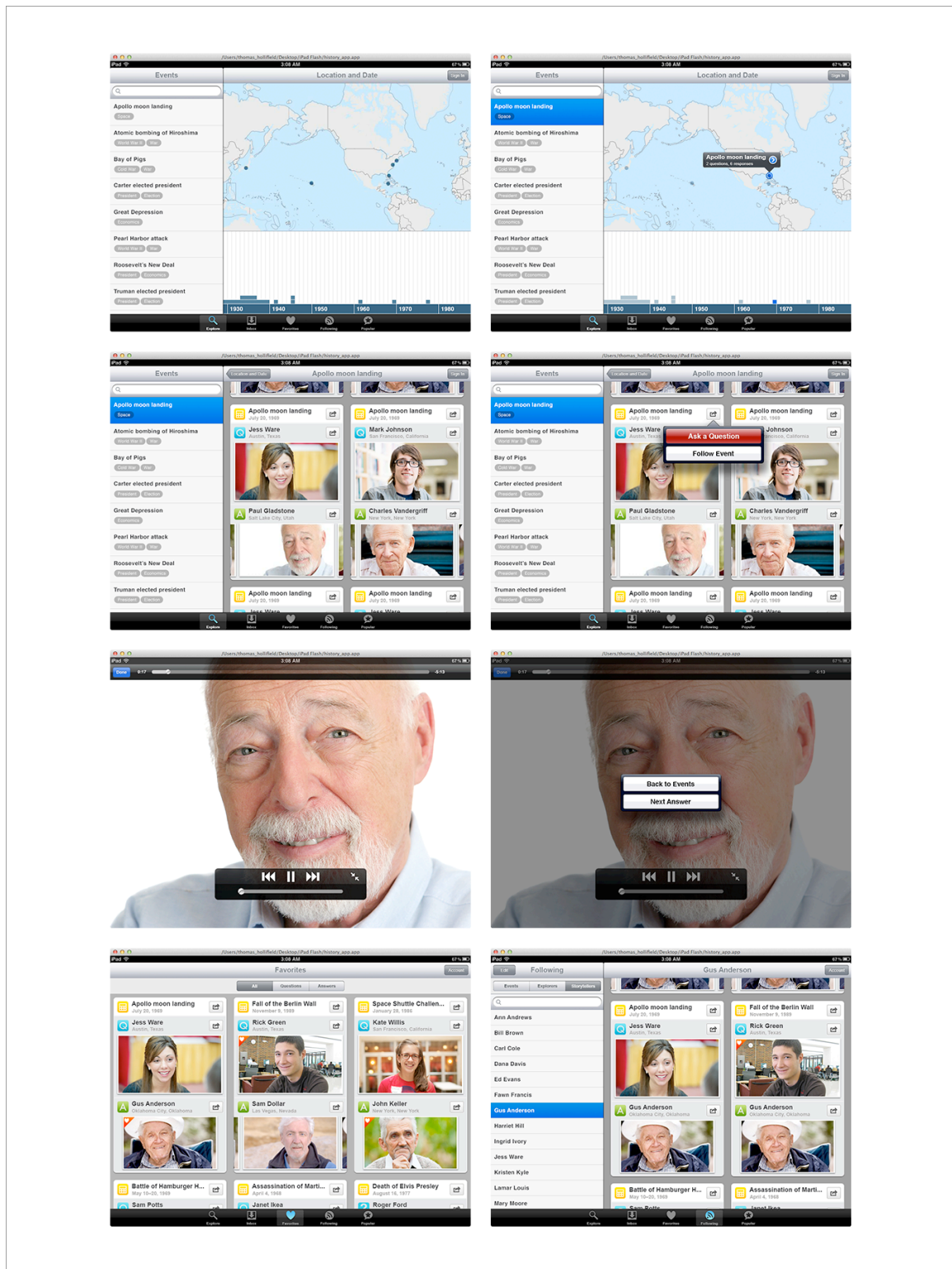*Figure B4.* Preliminary comps.

Figure B5. Still images from prototype.

APPENDIX C

USER FEEDBACK LOG

Table C1. Focused Discussion: Elder Personal Memory

	What personal memory from a historical event do you believe young people would benefit from hearing? Can you briefly describe this memory?
Elder 1	A big one is the assassination of JFK. I was in the 9th grade. This is one of those events where everyone knows where they were. We were just back from lunch in General Science class. The principal came to each class and told the teacher. Then, the teacher conveyed the information to the class. JFK was so charismatic. Even though it didn't affect my life personally, it was still a shock. That moment on is fuzzy, but I think we finished taking our test and finished the day as usual. Everyone was in shock.
Elder 2	I did a lot of work in the space program; I would share a story about working with the first black astronaut. We shared an office and worked together doing research in the Unites States Air Force. I even attended his inauguration into the U.S. Astronaut Hall of Fame.
Elder 3	It was a huge deal when JFK was shot. I was in 7th grade homeroom and the teacher came in and told us. It was an architecture classroom and I was sitting on a tall stool. When I got home I thought it would be a big topic of conversation, but it was not talked about because he was a Roman Catholic. Some thought it was not good to have a Catholic president because they believed he would give allegiance to the pope, not our country.
Elder 4	I would talk about the moon landing ticker tape parade. I was in dental school between 1968 and 1972. When we landed on the moon, we were thrilled. One requirement for the astronauts was to remove the metal fillings. They were afraid air under the fillings would cause the teeth to hurt. The Veteran's hospital distributed photos and flags. I kept them for a while, thinking they would be worth something some day. When the astronauts came back, there was a ticker tape parade in downtown Houston. We followed a school bus thinking it was going downtown, but we ended up in north Houston.

Table C2. Focused Discussion: Elder Emotions

	What emotions do you experience in describing this event?
Elder 1	It is a sad memory. It is one of those shocking things, but mellows as the years go by. Back then I was so incredulous. Now, 12 years-olds are shooting teachers. For my parents generation, the memorable event was when Pearl Harbor was bombed. The next generation will tell about 9/11. Events are put into context after time has passed.
Elder 2	I like to put these stories on my blog, where I can write and add photos.
Elder 3	Going back to that place in time, I didn't feel much emotion. I adopted the views of my parents. The way it has stayed with me, thinking about it today, is how vulnerable our president is. Even though he has security guards, JFK did too. If it could happen in 1960, it could happen now. If President Obama was shot like JFK, it would be tragic and I would feel much grief.
Elder 4	I felt pride and accomplishment because of how many details were involved. I was disgusted when people said it was staged. I was angry people would try to take away from the accomplishment. Being in Houston, I felt like part of the inner circle.

Table C3. Focused Discussion: Student Article Recall

	What do you recall from reading the article?
Student 1	• An event at Greensboro College • 1960 • A sit-in at a restaurant • 4 black men • The waiter refused to wait on them. • They met with more friends and came back later. • More people joined in and it spread to other areas.
Student 2	• Black students were refused service. • They came back with more students and the numbers continued to rise.
Student 3	• Racism and discrimination • Blacks not giving in • They sat there until the store closed. • Whites weren't aggressive. They just discriminated.
Student 4	• It doesn't say they were still refused service at the end. • There were black students and also white students.

Table C4. Focused Discussion: Student Video Recall

	What do you recall from watching the video?
Student 1	• He talked about an important problem. • Young people resented racial segregation. • On this issue he and others were willing to put their lives on the line because it was that important. • Mentioned power in numbers. From a few to thousands, it got easier.
Student 2	• If they didn't do it, it [racial segregation] would be passed down to other generations. • It was a fight for their manhood. • The numbers grew.
Student 3	• Felt his emotions and expressions more than just reading the paragraph. • Fighting for freedom was so important for him.
Student 4	• Conviction. You can tell he is 100% sold on what he was behind and wanted to accomplish. • He was willing to give himself up.

Table C5. Focused Discussion: Student Article/Video Comparison

	How would you compare the article and video? How are they similar? How are they different?
Student 1	The article was more fact based and not as emotional. There was no tone or inflection. Both talked about the same idea. The article was more specific.
Student 2	Both were about the fight for equality. The text was for students. The video had bold statements that stuck with me, like the idea of passing it [racial segregation] down to the next generation if something didn't happen. It could have been passed down to my generation.
Student 3	The subject was similar. The paragraph was a brief observation of an event. The video was more expressive and emotional. I felt like I could relate more to the video because I could hear him speak about what he was passionate about.
Student 4	The video adds a human element. Listening to someone who was there brings in human emotion. The paragraph was a general overview of the story but doesn't stick with you the same way.

Table C6. Written Questionnaire: Elder Favorite Characteristics

	What did you like most about the iPad application?
Elder 1	It's a neat idea.
Elder 2	Good opportunity to collect and share with others.
Elder 3	Liked clicking directly on the screen. Like the way it responded to my touch. Liked the visuals.
Elder 4	Layout. Simple to see everything. Search bar if the event wasn't there.

Table C7. Written Questionnaire: Elder Areas for Improvement

Elder 1	No answer.
Elder 2	Menus seem a bit confusing (not obvious how to add content).
Elder 3	Could have guidance directing me to the plus sign. Older people could use more direction.
Elder 4	Would like a way to add an event, similar to Wikipedia.

Table C8. Written Questionnaire: Student Favorite Characteristics

	What did you like most about the iPad application?
Student 1	I liked the map home screen and the toolbar panel.
Student 2	Very user friendly and can be navigated easily
Student 3	Very convenient! Enjoy listening to video/response rather than reading a history book. Ability to search any event and ask questions.
Student 4	The ability to access, store, and organize useful information through a very streamlined process.

Table C9. Written Questionnaire: Student Areas for Improvement

	What was missing or requires improvement?
Student 1	Maybe add more information about the events on the home screen.
Student 2	Maybe directly under question have a clear button that says View Answer to easily find other's perspectives on the question.
Student 3	None at this time.
Student 4	I think the next step for these devices will be the ability to orchestrate joint communication between several locations, kind of like a conference call FaceTime.

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