ABSTRACT

O'QUINN, ERIN LYNNE. A Practice in Collaboration: Communities, Universities, and the Community-Based Digital Archive (Under the direction of Dr. Jean Goodwin and Dr. Douglas Walls).

This study explores how community-based digital archive projects are collaboratively designed by universities and community stakeholders, specifically examining practices that may be associated with archive sustainability. My study builds upon existing knowledge in both digital archive studies and the Digital Humanities (DH) by investigating the currently under-emphasized issue of archive sustainability outside of only technical or financial considerations, but also the impact of deep engagement and collaboration among stakeholders. My project is therefore guided by the following research questions: What types of collaborative practices are being used to design community-based digital archive projects? What collaborative practices are associated with sustainability of community-based digital archive projects?

To answer these questions, I began with an integrative literature review, surveying published collaborative methods used by archive developers to address specific challenges associated with building community-based digital archives, including *reciprocity and stakeholder representation*, *community ownership and rhetorical sovereignty*, and *archive sustainability*. Current practices included collecting interviews and digitizing materials from community participants, metadata consultations, and ongoing discussion with community participants throughout archive development. This review offered insight into gaps for additional research; namely, I found a lack of discussion about how archival websites are developed, as well as little documentation of the practical collaborative strategies being used by stakeholders that may impact archive sustainability.

Following the integrative literature review, I conducted a qualitative case study analysis of an existing community-based digital archive, the Genoa Indian School Digital Reconciliation Project, through interviews with community participants and an archive developer from the collaborating university. In these interviews, I asked participants about their experiences in collaboratively developing the archive. Using cultural historical activity theory (CHAT) as an analysis framework, I reached several conclusions. First, conversation sustains the archive. Participants consistently pointed to ongoing meetings as the primary reason that the archive is revisited or stays at the forefront of conversation in their circles. Second, representation is vital to sustainability, but complex. Thoughtfully managing representation–who is included within archival discussions and within the archive itself–is vital toward the overall health of an archival project; however, fully representing every participant can be difficult, emphasizing the need for ongoing conversations among participants. Third, sustainability is a launchpad for more. Interviewee responses suggest that the archive is not just about sustaining the original project, but *growing* and expanding the range of possibilities.

Based on these findings, I recommend several approaches to developing collaboratively-designed, community-based digital archives. Drafting a working calendar early on with set times for stakeholders to meet can help to establish ongoing relationships as the archive develops, as well as facilitate stakeholder control over the project. Establishing and revisiting rhetorical goals during ongoing conversations can help developers to design an archive that meets community goals in the website layout, how records are structured, etc. Welcoming the opportunity to discuss challenges and working through tensions can also facilitate trust for all stakeholder groups. Finally, considering CHAT as a valuable framework for developers and community

participants to reflect on how a collaboration is going can help to support a sustainable archive project.

A Practice in Collaboration: Communities, Universities, and the Community-Based Digital Archive

by
Erin Lynne O'Quinn

A dissertation submitted to the Graduate Faculty of
North Carolina State University
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

Communication, Rhetoric, and Digital Media

Raleigh, North Carolina
2022

APPROVED BY:

_____	_____
Dr. Jean Goodwin Committee Co-Chair	Dr. Douglas Walls Committee Co-Chair
_____	_____
Dr. Jason Swarts	Dr. Chris Anson

DEDICATION

To my family, especially my parents, for their love and support over these doctoral years. To my twin sister, Elisabeth, for her encouragement that has meant everything to me within many (many) phone calls and late-night conversations. To my fiancé, Randen, who unexpectedly—and most welcomely—entered my life as I neared the finish line to love and cheer me across.

I love you all.

ACKNOWLEDGMENTS

Thank you to my co-chairs, Dr. Jean Goodwin and Dr. Douglas Walls, for your support and guidance throughout this project. Doug, you helped me to consider what to study and how to navigate this topic. Thank you especially for those times early on in your office discussing and analyzing and brainstorming. Jean, thank you for your insights and for offering the strong push and time I needed to complete this dissertation. Thank you especially for encouraging Zoom calls to break down my writing into manageable steps and to provide constructive feedback on drafts.

Thank you to the rest of my committee, Dr. Chris Anson and Dr. Jason Swarts. Your insights and encouragement throughout my time at CRDM have meant so much to me; thank you for your kindness in addition to your scholarship.

Thank you to those who participated in this study without whom I would not have been able to complete my research.

Thank you to my CRDM cohort; I appreciate you all. A special thanks to Hannah Mayfield, my encourager, my writing buddy, and my dear friend. Your friendship was an answer to prayer.

Thank you to my UNCW, UGA, and especially my ABAC professors: to Dr. Joseph Brown and his foundational English composition course where I was inspired to pursue a graduate degree in English, where I first thought that maybe I could also one day pursue a doctorate; to Drs. Jordan and Rebecca Cofer for their encouragement within the Rural Studies Club and beyond; to Dr. Erin Campbell for her wonderful 8am English class in my first-ever semester of college; to Dr. Sandra Giles for her English literature course and writing inspiration.

Thank you to the team at the Graduate Writing Center for being central to my doctoral experience. Thank you to my friends made through and after my time at GWC, Wendy

VanDellon and William Christy. Thank you for your support and cheers and those virtual TV show nights of 2021 (#Wendy'sPack).

Thank you to UNC's NCGrowth for the professional development opportunities and for the chance to engage with truly wonderful rural communities. Thank you to my coworkers at the Belk Center for Community College Leadership and Research. How could I have completed this without you? (I couldn't have.)

Thank you to my family: my parents, siblings, grandparents, extended family, and friends; my church families in Wilmington, Raleigh, and Statesboro, and my fiancé, Randen. You have prayed with me and for me. You have shown Christ to me as I worked through difficult moments in the last years.

And finally, thanks be to God for His goodness and faithfulness to me, especially as I think on the big and small blessings of these last years: for the people listed above, for coffee shops and quiet writing spaces like The Honeysuckle Tea House and Three Tree Coffee Roasters, for happy light-up flamingos at my Belk Center writing desk, for the songs of composers like Hans Zimmer and John Williams whose cinematic scores I listened to over (and over) again while writing this dissertation, for miniature pinscher pups like Toby to hold during both stressful and joyful times. I am so grateful.

BIOGRAPHY

Erin O'Quinn was born in Tifton, Georgia. In 2014, she received her BA in English from the University of Georgia; in 2016, she received her MA in English from the University of North Carolina-Wilmington. As a PhD candidate in the Communication, Rhetoric, and Digital Media program at NC State, Erin researches best practices for universities to develop sustainable community-based digital archives in collaboration with stakeholder communities. Her interests involve digital rhetoric, digital cultural heritage, and professional writing. Erin serves as Media and Communications Manager for the Belk Center for Community College Leadership and Research at NC State. Her current work includes an archival project that focuses on oral histories from current and former community college presidents and system leaders within the North Carolina Community College System.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: The Community-Based Digital Archive

A Fictitious Example

A line begins to form around the computer stations assembled on the community library table. Each colorful screen reads: *Dutton Community Archive: See and Hear Remnants of an Agricultural Past.* A university logo glows brightly at the bottom of the archive site.

"I'm interested in seeing if the photos I submitted a few months ago made it on here," one woman says as she steps forward. "Some of those were of my grandmother in front of the department store in 1929."

A man beside her nods. "We turned in a few photos of our family farm back when they sent out the announcement. I took photos of old farm equipment, too, and sent that in. They said any artifacts were welcome."

The two step forward and begin to press buttons on the screen. The cultural heritage archive, developed and presented to the community today by the nearby university, is a large one. 1,000 photographs, audio files, and digitized newspaper clippings: some located and saved from the Library of Congress website, some crowdsourced from members of the community over the last year. Both the man and the woman standing at one of the screens now are community participants in the project: those who are from the community itself with an expressed interest in showcasing the historic area in a public space. They browse through archive sections labeled, "About the Dutton Community," "Historic Figures," and "Agricultural Reform in the Area." They lean forward and stare at the photographs that pop up on the screen.

"Oh, look, there's a photo of Carla's brother back in the 70s." The man turns and waves to someone across the room. "Carla, your brother is on here."

A woman approaches. Smiles as she looks at the screen. "That's him, all right," she says.

An undergraduate university student steps forward from the corner of the room. A large sign on the table beside him reads, “Share Your Dutton Story Here.” The university logo is printed above the text. “We’re collecting more oral history interviews today from members of the community,” the student says. “So your family has a history here?”

The woman nods. “We do. My family has lived in Dutton since the twenties. My husband and I still farm here, and we haven’t retired yet.” She smiles.

“That’s awesome. Would you consider sharing your story with me?” The student points toward a microphone.

The woman laughs. “What would I have to do?”

“Just share your experiences about living and farming here.”

“Well, I’ve never had any trouble talking before. Guess I won’t now either.” The woman laughs again. She reviews and signs an audio permission form. She and the student then sit in the corner of the room; the student asks her questions for a half hour, nodding as the woman responds.

“What now?” The woman asks after they finish.

With a click of the mouse, the student saves the file to a computer folder. “I’m going to write a description about your interview,” he says, “And then someone will upload it to the archive.”

The woman pauses. “Where can I find it then?”

“Um, I’ll have to double-check which archive category it falls under,” the student says. “You talked about some great topics during the interview. We’ll let you know!”

--::--::--::--::--::--::--

The above example, while fictitious, demonstrates several benefits and frustrations that can arise when a university collaboratively works with a specific community on a public-facing project, particularly one grounded in cultural heritage. The project offers the community the chance to share their history on a wide-spread platform, and to digitally preserve the community's past. However, the latter half of the example showcases tensions that can arise when university developers fail to fully consider the ways they are collaborating with community participants, including lack of community ownership over their own archive. This tension sparks a question about sustainability: will the community stakeholders continue to use and contribute to this archive over time?

As a whole, sustainability within cultural heritage literature about digital archives "overwhelmingly refers to sustainability of financial and staffing resources" (Pendergrass et al., 2019, p. 168). However, less has been explored regarding the impact of collaborative practices and relationships upon the sustainability of community-based DH projects. To address this gap, my dissertation will ultimately examine the types of collaborative practices being used to design community-based digital archives—as well as any specific practices associated with developing sustainable projects. This study seeks to build upon knowledge in both digital archive studies and the Digital Humanities (DH) as a whole in two specific ways:

1) Promote more transparent discussion of the collaborative practices used in these types of projects; and

2) Identify potential strategies associated with developing sustainable DH projects to inform future projects.

In this chapter, I first briefly review collaboration in the digital humanities (DH). I also offer a definition of a university DH project that often more critically requires collaboration among

participants: the community-based digital archive. The majority of this chapter will then focus on known tensions and challenges when designing collaborative archival projects with stakeholder communities, including issues such as project reciprocity and participant representation, community ownership and rhetorical sovereignty over the archive, and overall archive sustainability. The final section describes my research questions, and outlines the respective dissertation chapters, including an integrative literature review (Chapter Two), the theoretical framework and methodology that underpin this project (Chapter Three), an analysis of collected data (Chapter Four), and a review of the overall implications of my study (Chapter Five).

Collaboration When Building Community-Based Archives

First, what is DH? Although a range of definitions exist, DH may be succinctly defined as "the use of digital media and technology to advance the full range of thought and practice in the humanities, from the creation of scholarly resources, to research on those resources, to the communication of results to colleagues and students" (Cohen, n.d.). Furthermore, "digital humanities create scholarship that transcends textual sources, such as multimedia sources, cultural datasets, and historical documentation" (Burdick et al., 2012)—including, as I will discuss, digital archives. In this section, I present a discussion of collaboration in DH, especially within digital archives that directly document cultural or historical moments within communities outside of the university.

In his article, "What is Digital Humanities and What's It Doing in English Departments?," Matthew Kirschenbaum (2010) argues that the digital humanities as a whole is "a scholarship and pedagogy that are *collaborative* and *depend on networks of people*" (p. 6, emphasis added). I agree that collaboration is inherent within DH work (Nowviskie, 2012; Griffin & Hayler, 2018): you cannot develop DH projects without some form of collaboration—a

process that might be as simple as briefly consulting with institutional partners, technicians, etc. Griffin & Hayler (2018) point out that, if DH scholars are not already engaged in active community partnerships within and outside the university, they are "becoming increasingly aware that this is what they should be, or are at least expected to be, doing" (para. 1). This expectation is supported by scholarship which outlines collaborative design practices during the development of DH tools or resources, including partnerships with institutional entities such as libraries (Hockey, 2012; Hubbard & Ryan, 2018; Taylor et. al, 2018), university students (Hubbard & Ryan, 2018), and communities outside the university (Ridolfo, Hart-Davidson, & McLeod, 2011; Taylor & Cheverst, 2012; Mara & Mara, 2015). Whatever the project, the types of collaborative processes detailed involve purposeful communication and activities among participants to develop the final DH project.

One type of DH project that more often requires critical collaboration between participants is a community-based archive developed by a university. Before exploring the definition of digital archives in the context of university projects, however, I first define "digital archives." While archives as a whole "implement and manage systems for carrying recordkeeping systems forward across time and domains of use" (Cunningham, 2008, p. 532), digital archives specifically help to "preserve, promote, and provide long-term access to digital—that is, digitized and born-digital—collections" (Sabharwal, 2015, p. 27). Examples of digital archive materials include anything from oral histories to digitized images of historic artifacts to crowdsourced repositories of personal experiences documented by individuals during historic events (such as COVID-19).

As I will present under "Tensions and Challenges" in this chapter, building digital archives that document communities outside of the university necessitates collaborative design

processes with participants. For example, community materials (e.g. oral histories and digitized photographs) are being added to a new digital space with less community control over what information is shared, what narrative is presented, etc. Here, what constitutes a "community" may be broadly defined; Welland (2015) outlined communities as genetic or social relationships such as family or communities of individuals who identify with a specific culture, ethnic group or race, gender or religion (qtd. in Welland & Cossham, 2019). Turning to community archives in particular, according to the Wilson Special Collections Library through the University of Chapel Hill-North Carolina, community-based archives or memory projects "can begin with an existing collection of historical materials, the desire to record and share many voices in the community, or the need to document the activities of a movement or group" (Creating and Growing Community-based Memory Projects, n.d.). Welland & Cossham (2019) describe the participants that are associated with this type of project:

> Community archives may be stand-alone entities or they may be part of other organisations based in a particular community, such as schools, *universities*, historic societies, churches, indigenous organisations, cultural or indigenous communities and local government-supported or quasi-government organisations. (n.p.)

Since I am interested in the collaborative design processes that universities use to create digital archives with communities, I use the term, "community-based digital archives," for the duration of this study with that context in mind. This is not to imply that digital archives developed as stand-alone projects by communities or in partnership with other institutions such as museums, nonprofits, and public and private libraries are not valuable to explore. However, as I will discuss below, there are unique tensions and challenges to creating university-associated community-

based archives that make this specific study necessary (and this exploration may, in fact, provide lessons for other institutions to broadly apply).

Tensions and Challenges When Designing Collaborative DH Archival Projects

As Ellison & Eatman (2008) agree, collaboration is a process that should be incorporated "into the very guts of the institution and what it values" (p. 16). Within DH archival projects specifically, developers are usually committed to collaboration in some capacity. However, even when collaborative processes are involved, there are often specific challenges to designing digital archive projects that attempt to represent a community. Although I will discuss these challenges more extensively in Chapter Two when examining the types of collaborative practices used to design community-based digital archive projects, the following section offers a brief overview of three overarching issues. These include: Reciprocity and Participant Representation, Community Ownership and Rhetorical Sovereignty, and Archive Sustainability.

Reciprocity and Participant Representation

While collaborative university/community partnerships are valuable for public projects like archives, university stakeholders are commonly positioned as gaining the most from these efforts. Students, for example, are frequently emphasized as key beneficiaries (Cox, 2017; Harman et al., 2017; Needham & Quintiliani, 2016; Johnson, 2012). As part of an assignment in a digital humanities class, undergraduate and graduate students might help to gather materials for their university's archive on a specific historic community. Materials include collecting photographs and other community artifacts, or even conducting oral history interviews with community participants. Students may then create descriptions about the materials and upload for inclusion in the archive. Such actions are often praised as providing students with valuable

work experience or giving them intimate historical knowledge; more value may indeed be assigned to student learning than anything else (Goldbard, 2008, p. 56, as qtd. in Jay, 2012). However, while valuable and certainly collaborative, this process can be problematic since students are only able to select bits and pieces of narratives for public consumption. They are the ones who decide what is appropriate or more related to the goals of the overall archive, potentially leaving out crucial histories of the community being documented. In addition, community members often have little input in the development of the archive itself or how their materials will be shared, limiting their representation on the site and creating a less-than-reciprocal relationship. For university/community partnerships to be truly successful in dismantling more traditional archiving methods, then partnerships must ensure "that community engagement projects serve communities as well as they do students" (Goldbard, 2008, p. 56).

One example that showcases a collaborative university/community partnership that can help to address the above issues is from Lazem, Giglitto, & Preston's (2017) blog post, "A tent, a pigeon house, and a pomegranate tree. Getting emotional over UX design." The authors detail a group of university students working on a community archive with the Bedouins, a formerly nomadic community now settled in Egypt and "at risk of losing social practices, oral traditions, customs, language, and identity" (para. 3). Strategies include students not just collecting archive materials, but taking tours with community members, using personas to describe target users, and talking with community members about project prototypes. The authors claim that, by supporting the participation of community members *along with* students, such an approach can harness community investment, ownership, and representation in the project (para. 2), making sure that the community gains just as much from the relationship as university participants. The approach also works to ensure that all participant voices are represented in the final archive. However, as I

will share in Chapter Two, this kind of collaborative archiving process is often less common among students and community participants, representing an ongoing challenge.

Community Ownership and Rhetorical Sovereignty

Netshakhuma (2019) points out in a study of South African universities and communities archives that "preservation of community history present[s] universities with a challenge regarding the *ownership*, trust and accountabilities, imbalance that favours universities and can often put the community – based archives at a disadvantage [Rodrigues *et al.*, 2014; Jules, 2019]" (p. 641, emphasis added). Below, I present a primary concern that impacts a community's ownership of their own archive: lack of community control over archival metadata descriptions.

In their article, "Building Sípnuuk: A Digital Library, Archives, and Museum for Indigenous Peoples," Karuk Tribe et al. (2017) describe an archive created to provide self-representative and culturally appropriate access to, control over, and preservation of Karuk cultural heritage. The authors share that, often when using non-Native repositories, "the Native source communities have neither access to nor control over the cultural information held in these records" (p. 298). One glaring example is lack of community control over metadata. Metadata is often vital to digital archives as it "may describe and document the subject matter, information about the location, time and person generating the data, format, access and copyright (i.e. the properties of the data source)" (De Lange, et. al., 2010, p. 163). We may assume that collaborative university/community archival projects reduce concerns over metadata creation and ownership. However, even when materials are collaboratively gathered *from* community members, they may not be asked for detailed input on how to describe and categorize these same materials. As Karuk Tribe et al. (2017) share, "materials in non-Native repositories have been overwhelmingly cataloged by people without the necessary relevant cultural knowledge. This

results in highly generalized and often inaccurate metadata as well as insufficient culturally responsive direction relative to collections management" (p. 298). Inaccurate or insufficient metadata can lead to a lack of rhetorical sovereignty for community participants: "the inherent right and ability of peoples to determine their own communicative needs and desires [...] to decide for themselves the goals, modes, styles, and languages of public discourse" (qtd. in Ridolfo, 2015, pp. 57-58). The issue of ensuring rhetorical sovereignty points to a specific action needed within collaborative community-based archives: apart from working with community participants to gather archival materials, "questions need to be raised *every step of the way* when thinking of digital equity and community empowerment" (Henry, 2018, p. 96, emphasis added)—including how metadata descriptions are developed (and by whom). This can help to increase community ownership and rhetorical sovereignty over digital collections.

Archive Sustainability

Eschenfelder et al. (2016) point out that the definition of sustainability is multifaceted in their study, "What are we talking about when we talk about sustainability of digital archives, repositories and libraries?" The authors add that, "when two people talk about it, they may be speaking about very different things" (p. 1). Given the range of different projects and various discussions about sustainability within DH, for the purpose of this study, I use the definition provided by the Digital Humanities Lab at the University of California, Berkeley:

> Project sustainability may be defined as *the way a project connects to adjacent tools and communities, both actively and passively*. Who uses your project and how easy is it for someone to create a derivative use? How interoperable is your project —how easy it is for your project to connect to other tools and data sources? What choices — technical and

> social — can you make to enable future collaborations? ("Project Sustainability in DH: Collaboration and Community," n.d., emphasis added).

In the example of a collaborative community-based digital archive project, specifically, this definition of sustainability may be extended to include community participants using and contributing to the archive over time, continuing collaborative relationships if needed, and sharing within their existing circles and beyond. Sustainability may also involve what is "left behind" after a university effort has concluded: What occurs when project funding ends? Who manages the archive over time? How (or is) it updated?

Although "sustainability" may be mentioned within studies about digital archive projects (Somerville & EchoHawk, 2011; Needham & Quintiliani, 2016; Yelmi et al., 2016), this does not mean the topic is necessarily explored in detail. According to Eschenfelder et al. (2016)'s study of how Library and Information Science (LIS) authors depicted the concept of sustainability of digital archives, repositories, and libraries in English language texts over time, sustainability was often discussed only in passing: authors made only "brief references to sustainability issues" (p. 5). In addition, discussions of sustainability were "often fragmented by subtopic, dominated by discussion of technical or financial issues and lacking in exploration of other areas" (p. 5). Pendergrass et al. (2019) agree that, within cultural heritage literature about digital archives, sustainability "overwhelmingly refers to sustainability of financial and staffing resources" (p. 168). With financial resources in mind, discussions about building collaborative relationships for the archive (such as working with other institutional participants) may be more focused on reducing overall project costs (Eschenfelder et al., 2016, p. 3).

As a whole, Eschenfelder et al. (2016) note that most of the literature discussed sustainability "in the context of the challenges and opportunities of particular projects, leaving the reader to draw out more generalizable lessons. Few texts discussed sustainability abstractly or across institutions *or time*" (p. 5, emphasis added). Ridolfo (2011) agrees that "studying the long-term use (or lack thereof) of digital projects, especially the long-term conversation surrounding projects" has been less-explored. He positions this as an opportunity for future study.

Collaborative Design Processes in DH: Moving Forward

In this chapter, I have presented an overview of collaboration in DH work, specifically within community-based digital archives. I have discussed design tensions or challenges related to digital archive projects grounded in university collaboration with stakeholder communities. These challenges are used to frame my upcoming study of community-based digital archive projects involving collaborative design methods to better understand what methods are currently being used. By providing space for discussion about existing community-based archives that were developed in collaboration with stakeholder communities, we can examine what methods may be associated with sustainable design practices. My research questions for this study are therefore as follows:

> **Q1:** What types of collaborative practices are being used to design community-based digital archive projects?
>
> **Q2:** What collaborative practices are associated with the sustainability of community-based digital archive projects?

In Chapter Two, I offer an integrative literature review which provides a more in-depth overview and analysis of conversations within the last ten years regarding collaborative design methods in joint university/community archiving projects. This review includes projects that incorporate various collaborative design methods. To gather a broad sample of existing conversations, I locate published scholarship about joint university/community digital archive projects, and specifically review the description of methods for each. I then identify what challenges these methods are seeking to address, as well as any strengths or any inconsistencies across the literature.

In Chapter Three, I present the theoretical framework guiding my study. Cultural-historical activity theory (CHAT), which I will later discuss in more depth, offers a framework to systematically understand how a collaboratively designed, community-based digital archive operates as an activity system, and any tensions that may impact this system. Here, an activity system may be defined as "a group of people who share a common object and motive over time, as well as the wide range of tools they use together to act on that object and realize that motive" (Kain & Wardle, 1997, p. 1). I use CHAT as a tool to analyze interviews from the activity system of a community-based archive, specifically through asking CHAT-specific questions of my collected data such as, "What motivated subjects to conduct the activity? Did different subjects view the activity and the objectives of the activity differently, and if so, why? What were the goals of the activity? What actions resulted because of these goals?" (Detlor, Hupfer & Smith's, 2018, p. 3). This application of CHAT has been successfully used within studies such as Detlor, Hupfer & Smith's (2018) analysis of a city-wide digital storytelling initiative in Hamilton, Canada, and helps me to better understand what kinds of outcomes are associated with certain design decisions being made throughout archive development. Similarly, I can also explore the

relationship-building moves that archive developers engaged in for these projects, and ultimately whether any collaborative practices are associated with overall project sustainability.

In Chapter Three, I also present the methodology for my study. I use a case study approach with a qualitative analysis of interviews with community participants of a select community-based digital archive. The first part of my study in Chapter Two, the integrative literature review, helps to identify the types of collaborative design practices being used by archival developers. The second part of the study, interviews with project participants from a digital archive project, supports better understanding of sustainable design practices for community-based digital archives (e.g. what do community participants remember/value when collaboratively designing archival projects? What keeps them coming back or contributing to the archive?). By gathering qualitative data from participants using ethnographic methods such as participant interviews, we may begin to consider sustainable design practices that can inform the strategic development of future projects.

Chapter Four offers a case study exploration of the Genoa Indian School Digital Reconciliation Project: a digital archive collaboration between the Genoa U.S. Indian School Foundation, Community Advisors from the Omaha, Pawnee, Ponca, Santee Sioux, and Winnebago tribes of Nebraska, the University of Nebraska-Lincoln, and descendants of those who attended Genoa. In this chapter, I present findings from my analysis of semi-structured interviews with both archive project developers and community participants. My summary includes a summary of archive development as framed by CHAT, as well as an overview of both contradictions and congruencies in the activity that both identify and help to stabilize opportunities for change. I conclude with a discussion of key themes and implications from the study.

Finally, in Chapter Five, I present the overall implications of my study regarding the development of a working language and framework that universities may replicate in future projects when collaboratively designing community/university DH projects. I also review potential contributions to work in the larger fields of both rhetorical studies and DH. The dissertation concludes with an overview of future research and how DH scholars may build upon the lessons learned from this project.

CHAPTER 2: Designing Community-Based Digital Archives

A Review of Collaborative Methods

This integrative literature review presents and discusses collaborative design methodologies used during the development of community-based digital archives. According to Richard Torraco (2005) in his article, "Writing Integrative Literature Reviews: Guidelines and Examples," the integrative literature review helps to "create new understandings of the topic through one or more forms of synthesis" (p. 357). Through the analysis, critique, and synthesis of articles on this topic within the last ten years, we may develop a broad conception of existing collaborative methods, as well as potential areas for new knowledge (p. 359). The review is organized by the challenges that collaborative design methodologies are attempting to address, functioning as an in-depth overview and analysis of more recent conversations regarding collaborative DH design methods, specifically digital archives. Through this review, I seek to explore my first research question:

> **Q1:** What types of collaborative practices are being used to design community-based digital archive projects?

In this chapter, I first present the methodology used to collect literature. I then offer a review and critical analysis of the literature; specifically, what collaborative methods were used to address specific archival design challenges, and any areas observed for future study.

Review Framework

To gather a broad sample of existing conversations on collaborative design methods used in joint university/community archives, I identified potential literature from two sources:

1. Initial research from scholarly journal articles conducted on this topic for Chapter One of my dissertation

2. A search of additional scholarly journal articles within the NC State Library System

I identified four criteria for article inclusion in my study. First, the article needed to be published in a peer-reviewed scholarly journal to ensure project validity. Second, the focus of the article must be a digital archive created by a university with community participants involved in some capacity. As previously mentioned, community participants are defined as having genetic or social relationships such as family or communities of individuals who identify with a specific culture, ethnic group or race, gender, or religion (qtd. in Welland & Cossham, 2019). Any articles that failed to mention community participants were excluded from the study. Third, the article needed to offer some description of how the digital archive was created—whether that included material collection, site design, or both. Fourth, the article must have been published between 2010 and 2020 to ensure currency.

Before the study began, I had already located two potential articles from previous research for the dissertation project. To locate additional scholarly journal articles, I used a combination of different search terms in the NCSU Library System including, "community archiving," "collaborative archives," "university archives," "collaborative design + digital archive." For all articles published between 2010-2020 that appeared using these keywords, I conducted a staged review; that is, I initially reviewed article abstracts. If the article seemed to meet the inclusion criteria, I then conducted a further review of methods within the article; if the article included a description of collaborative design methods that involved working with community participants in some capacity (however limited or extensive), I added that article to the set for additional review and analysis. After one week of applying multiple search terms or a combination thereof, and beginning to achieve the same results in articles that appeared, I

realized that the keyword list had been exhausted. This overall process generated a total of 17 sources for analysis.

To analyze the selected articles, I converted all to PDF format. I then created an Excel spreadsheet with each article title listed. Within the spreadsheet, I highlighted and pasted any keywords that appeared in article abstracts and also listed quotes found throughout each article about methods used (and any author discussion about these methods). I grouped articles with similar descriptions and approaches about collaborative design methods together. Three articles were grouped under Group A: Collaboration w/ Community Participants Throughout Archive Development. The other 13 articles fell under Group B: Collaboration w/ Community Participants in the Initial Phases of Archive Development, and one outlier was grouped under Group C: Intention to Collaborate w/ Community Participants Throughout Archive Development. From here, I began to develop categories for similar words or descriptions about collaborative methods, resulting in several themes. The next section will include an in-depth analysis of these themes, followed by a discussion of issues found, and areas for future research. For context, the articles are listed below, along with the title of the respective digital archives created, and both university and community participants involved in the project.

Table 2.1. A description of articles selected and analyzed for this study.

Article Title (alphabetized)	**Archive**	**University Participant(s)**	**Community Participant(s)**
Allard, D., & Ferris, S. (2015). Antiviolence and marginalized communities: Knowledge creation, community mobilization, and social justice through a participatory archiving approach.	The Digital Archives and Marginalized Communities Project (DAMC)	University of Manitoba	Indigenous and sex worker communities
Brown, K.L. (2016). On the Participatory Archive: The Formation of the Eastern Kentucky African American Migration Project.	Eastern Kentucky African American Migration Project	Southern Historical Collection at University of North Carolina-Chapel Hill	Intergenerational African American families that migrated migration in and out of the coal camps of eastern Kentucky

Table 2.1. (continued).

Cox, J. (2017). The abbey theatre digital archive: A digitization project with dramatic impact.	Abbey Theatre Digital Archive	National University of Ireland Galway (Library)	Ireland's national theatre, Abbey Theater, and stakeholders
De Lange et al. (2010). Giving Life to Data: university–community partnerships in addressing HIV and AIDS through building digital archives.	Digital archive for HIV/AIDS education	University of KwaZulu-Natal in South Africa and McGill University	Rural community in KwaZulu-Natal in South Africa
Harman, et al. (2017). (Co)Constructing Public Memories: Interdisciplinary Approaches to Creating Born-Digital Oral History Archives.	VT Stories	Virginia Tech	Virginia Tech (community is part of the university)
Hubbard, M. & Ryan, D. (2018). Chapter 10: Digital Humanities as Community Engagement: The Digital Watts Project.	The Digital Watts Project	Loyola Marymount University, Los Angeles; Southern California Library (SCL)	Members or family members of the 1965 Watts "Uprising" or "Riots" in South Los Angeles, CA
Johnson, B. (2012). Gospel Archiving in Los Angeles: A Case of Proactive Archiving and Empowering Collaborations.	Gospel Archiving in Los Angeles (GALA)	University of California-Los Angeles	Heritage Music Foundation of Los Angeles
McGrath, J. (2019). Stories of the City: Newark, *Newest Americans*, and Hyperlocal Forms of Digital Public Humanities.	Newest Americans	Rutgers University–Newark	African American Newark residents
Needham, S., & Quintiliani, K. (2016). Rethinking local history through collaboration: The creation of the cambodian community history and archive project.	Cambodian Community History and Archive Project	California State University	Cambodians in Long Beach, CA
Ridolfo, J., Hart-Davidson, W., & McLeod, M. (2010). Balancing Stakeholder Needs: Archive 2.0 as Community-centred Design.	Samaritan Digital Archive Project	Michigan State University (MSU)	The Samaritan community
Smart, E. & Young, K. (2013). Fruits of Their Labors Digital Collection: A Case Study.	Fruits of Their Labors Digital Collection	Brigham Young University's (BYU) Wilson Folklore Archives; American Folklife Center at the Library of Congress	Utah County orchard culture
Somerville, M.M., & EchoHawk, D. (2011). *Recuerdos Hablados*/Memories Spoken: Toward the Co-Creation of Digital Knowledge with Community Significance.	Recuerdos Hablados/Memories Spoken	University of Colorado Denver; Center for Colorado & the West at Auraria Library (CC&W)	Latinos/Hispanics in Colorado

Table 2.1. (continued).

Taylor, N. & Cheverst, K. (2012). Supporting community awareness with situated displays.	Wray Photo Display	Lancaster University	Residents of Wray, a small village in northwest England.
Thompson, B. & Baugnon, R. (2017). A collaborative digital oral history collection: Building a digital collection of student scholarship documenting Latino Americans in southeast North Carolina.	'Somos NC: Voices from North Carolina's Latino Community''	University of North Carolina-Wilmington	North Carolina Latino community
Underberg-Goode, N. (2020), Participatory Research and Design in the Portal to Peru.	Portal to Peru	University of Central Florida	The women who work with the Center for Traditional Textiles of Cusco, Peur.
Yeh, G.I. (2016). Filipino Love Stories Digital Archiving Project.	Filipino Love Stories: San Luis Obispo and Northern Santa Barbara Counties, 1920–1970	California Polytechnic State University in San Luis Obispo	Local Filipino community members and organizations
Yelmi, P., Kuşcu, H. & A. E. Yantaç (2016). Towards a Sustainable Crowdsourced Sound Heritage Archive by Public Participation: The Soundsslike Project.	The Soundsslike project	Koç University	Istanbul residents

Collaborative Methods That Address Archival Design Challenges

This section is divided into two parts: first, a review of the collaborative methods used by archive developers to address specific archival design challenges associated with building the community-based digital archive, including *reciprocity and stakeholder representation*, *community ownership and rhetorical sovereignty*, and *archive sustainability*. Second, I analyze and discuss three areas for future study that emerged based on this review: inconsistency in term use, lack of discussion about archive sustainability, and little to no discussion about designing the archival website.

Reciprocity and Stakeholder Representation

As stated in Chapter One, one approach to addressing the challenge of stakeholders both gaining value from and having their input included in the final archive is to involve them in the archival development process. University participants such as students are often presented as a group that can benefit the most from these types of projects. Indeed, over half of the analyzed sources mention both undergraduate and graduate student collaborators working on joint university/community archives. This process may involve students participating in coursework or service learning projects by collecting interviews from community participants, digitizing materials, or conducting research and writing metadata descriptions (Yeh, 2016; Thompson & Baugnon, 2017; Hubbard & Ryan, 2018; Johnson, 2018; McGrath, 2019); actively prototyping or designing the digital archive site (Underberg-Goode, 2020); or working on a combination of part or most of these methods (Smart & Young, 2013; Harman et al., 2017; Needham & Quintiliani, 2016). Of the sources that describe student involvement in archive development methods, most offer value statements that position students as being stakeholders who gain the most from collaboratively working with communities on digital archives. In Needham & Quintiliani's (2016) article, "Rethinking local history through collaboration: The creation of the Cambodian community history and archive project," students are specifically listed as being among the primary beneficiaries of the ongoing archival development process (p. 14). Value statements about how students profit from this process range from the theoretical to the practical.

For example, students may gain work experience (Cox, 2017) that can be both "interdisciplinary" and "real-world" (Harman et al., 2017, p. 126) through such activities as managing archive social media, conducting interviews and creating web content. Additionally, through working with different communities, cultures, or simply those with other experiences

during archive production, students are offered the chance to participate in "knowledge production" (Johnson, 2012, p. 238). By talking with or researching community stakeholders, they may learn "how humanities work could contribute to on-the-ground efforts to promote justice" (Hubbard & Ryan, 2018, p. 140; bridge culture and generational gaps through conversations and "discover the subtler ways that one experiences and responds to inequity" (Yeh, 2016, p. 395); and finally, depending on the archive, students may experience history in action and feel as though they are making a difference (Smart & Young, 2013, p. 6).

Apart from student participants being presented as acquiring the most value from collaborative archival work, several authors referenced "reciprocity," detailing efforts to create some type of reciprocal relationship among *all* participants during archive development. These authors did, however, differ in their understanding of the concept. Needham & Quintiliani (2016) shared that, after digitizing materials contributed by community participants, they provided individuals with a copy of their digital images on a CD "as a form of reciprocity" (p. 6). Johnson (2012) took this further by noting that, in the interest of reciprocity for their project, archive developers taught community members how to thoroughly document events being captured for the Gospel Archiving in Los Archive (GALA) project (p. 224). Similarly, although not yet underway at the time of publication, developers of the Digital Archives and Marginalized Communities (DAMC) project (Allard & Ferris, 2015) planned to involve community participants in every facet of archive development, including planning and implementation. The goal: "creating *reciprocal* relationships that form the bedrock on which to build activist and participatory archives" (p. 380, emphasis added).

Not all authors specifically used the term, "reciprocity," but included this same emphasis upon building reciprocal relationships among archive stakeholders. De Lange et al. (2010)

pointed out that the main purpose of their archive "was to place community members as active participants at the centre of data analysis, as opposed to recipients of findings" and to offer a voice to all stakeholders (p. 160). Ridolfo, Hart-Davidson, & McLeod (2010) also talked extensively about involving community participants in archive development through conversations, focus groups, etc. with the aim to create an archive that focused on stakeholder needs.

Community Ownership and Rhetorical Sovereignty

Whether community stakeholders were indirectly involved (Smart & Young, 2013; Hubbard & Ryan, 2018) or actively contributed to the development of materials (De Lange et al., 2010; Somerville & EchoHawk, 2011; Yeh, 2016; Cox, 2017), all authors point out the value of working with community participants and having them contribute to the archive itself. The reasoning is that this contribution can offer community participants ownership and rhetorical power over the project, making the archive more valuable to them. Two popular approaches emerged in the literature to facilitate this type of community ownership: interviews and metadata consultation. A less discussed but significant approach also appeared in three separate articles: ongoing discussion with community participants throughout archive development.

Interviews.

In addition to often serving as archival materials, interviews with community participants were frequently included as part of archive development. Thompson & Baugnon (2017) talk about having students conduct oral history interviews with a member of the local or regional Latino community for the *Somos NC: Voices from North Carolina's Latino Community* project. Topics included "place of origin, childhood memories, location of residence, current

employment, experiences with discrimination, the current political climate, and cultural heritage" (p. 32). Similarly, Harman et al. (2017) point out that developers for the *VT Stories* archive tasked students with interviewing community participants from campus, and also asking interviewees to review the resulting transcript for accuracy. Interviews for the *Soundscape of Istanbul* project (Yelmi et al., 2016) were somewhat more organic as interviewers randomly talked to "elderly locals in streets" (p. 3) to determine which sounds best defined the city of Istanbul.

Digitization events or requests for archive materials also accompanied interviews. For example, when writing about the *Gospel Archiving in Los Archive* project, Johnson (2012) notes oral history interviews were conducted with members of the gospel music community while also soliciting donations to the GALA collection and/or the Archive (p. 227). Smart & Young (2013) share a similar approach as researchers went to the community to gather information for the "Fruits of Their Labors" collection through interviews with "knowledgeable orchard growers, fruit sellers, and others supporting orchard production" (p. 5). The twenty-five interviews also resulted in "tapes, transcripts, photographs, photo logs, audio logs, and field notes" (p. 5) for the archive. Yeh (2016) discusses venues provided for mass digitization days while students conducted interviews to contextualize digitized materials. Finally, Needham & Quintiliani (2016) share that they would visit members of the Cambodian community to interview and scan photos.

Metadata Consultation.

As discussed in Chapter One, metadata is often vital to digital archives as it "may describe and document the subject matter, information about the location, time and person generating the data, format, access and copyright (i.e. the properties of the data source), depending on the chosen schema" (De Lange, et. al., 2010, p. 163). For community-based digital

archives in particular, descriptive metadata, which identifies and describes records, may enable users to more easily locate contextual information about the records that they are researching. However, the creation of metadata can be a subjective process. Archive developers may assign artifacts significance and meaning that might not be shared by those for whom the archive is intended. To address this issue, authors may incorporate interviews/consultations about metadata with community participants—which can also enhance project collaboration. Indeed, a portion of collected literature presents the "collaborative," "participatory," or "co-created" design of community-based archival projects as being largely grounded in metadata creation. One study (Somerville & EchoHawk, 2011) suggests that lack of community involvement in metadata creation is part of the reason that a previously created archive was not sustainable. Specifically, developers selected and produced materials and generated descriptive metadata without consulting community participants beyond initial interviews; this lack of involvement, the authors assert, led to the archive being "largely ignored by potential campus and community viewers" (p. 653).

When metadata *is* co-created or involves community members, the amount of involvement in this part of the design process varies. For example, Smart & Young (2013) share that their team realized during interviews and field school events that the Fruits of Their Labors Archive would be of particular interest to local and family historians. The metadata team used this understanding to label and organize the digital content (p. 11). Similarly, in an archive like the Digital Watts Project (Hubbard & Ryan, 2018), the views of community participants were used during the metadata creation process, but individuals themselves were not involved: "students had to create their own subject terms (and thus their own information organization system), for which the course readings, *speaker presentations*, and class discussions were meant

to help prepare them" (p. 144, emphasis added). Here, insights from community speakers were indirectly used to inform choices about what metadata should be included, but the ultimate decision was left to student developers.

Alternatively, some projects did include working directly with all stakeholders to generate metadata. *The Abbey Theatre Project* (Cox, 2017), for example, involved collaboration between archive stakeholders and developers to consider metadata requirements (p. 25). In a study focused on university–community partnerships in addressing HIV and AIDS through building digital archives, De Lange et al. (2010) share that much time was spent considering which elements "to include in the metadata schema, not only to facilitate optimal use by the various researchers, but also by the participants from the community" (p. 163). While metadata development primarily involved extensive discussion and video conferences between the two institutions in Canada and South Africa that were collaborating on the digital archive, developers also sought feedback from community participants: namely, teachers in the rural community in KwaZulu-Natal, South Africa, who would be using the archive. The teachers worked with and revised image captions--a process which De Lange et al. describe as "participatory archiving" (p.166). For the *Filipino Love Stories Digital Archiving Project*, Yeh (2016) notes a similar process.

Although those outside of academic and IT personnel were not involved in the "back end" of archive development (such as installing and developing the website and archive database), both students and community members participated in the "front end" of development. Yeh (2016) defines the "front end" of archival project work as the process of gathering and digitizing archive materials, and talking to community members for additional materials or information. Students collected and digitized materials from community members, as well as

specifically interviewed them to generate metadata and contextualize provided materials (p. 394). Somerville & EchoHawk (2011) echo this approach. For the *Recuerdos Hablados/Memories Spoken Archive,* developers collected materials from community participants while also talking with them to create descriptive metadata. The authors reason that "the process of creating, locating, evaluating, and using information in various forms does not happen in a vacuum, away from community contexts where meanings and values are in play" (qtd. on p. 659); therefore, this type of archive must include community collaboration on elements such as metadata to be valuable while also providing a voice to underrepresented populations. These types of processes with community members are presented as "collaborative" and "participatory" by authors, and indeed, this is a valuable approach to include members and their materials in the archive. While I would label their participation as being more "contributory" as opposed to actively participating in archive development, the development of these projects exhibits a positive direction of active community involvement.

Iterative Design.

Several authors determined that an iterative design approach to the archive can offer cultural stakeholders ownership of their materials in a digitized space, as well as rhetorical sovereignty or "the general strategy by which [...] [indigenous people] aim to best recover our losses from the ravages of colonization: our lands, our languages, our culture" (Ridolfo, Hart-Davidson, & McLeod, 2010, p. 146). By following an iterative design process via ongoing dialogue with all stakeholders, the final interface can reflect the needs of the community as well as their goals for the archive.

In their article, "Balancing Stakeholder Needs: Archive 2.0 As Community-centred Design," Ridolfo, Hart-Davidson, & McLeod (2010) outline their process of building a digital

archive with cultural stakeholders: in this case, a small Samaritan community. The authors state that they saw an iterative, user-centered design process "*as a way to tailor the archive to the needs of each particular stakeholder community*." Their process included identifying the users of the archive (both scholarly and cultural stakeholders) and following a design pattern where the archive designers revisited the cultural stakeholder communities for feedback after each round of mock-ups. The authors identify this process as "fine-tuning interfaces the various stakeholders would find useful, but also in helping us identify specific areas where our observations about the user community and their needs were incorrect or inaccurate." More specifically,

> ...as designers, we had assumed prior to our fieldwork that designing a Web portal for the community in the Samaritan script would be useful and desirable. However, from our discussions with the community we learnt that this is not of any utility. The Samaritans have no use at this time for digital interfaces in Samaritan, and we were instructed to localise the website in English, Arabic, and Hebrew. These interactions with stakeholders are moments of Archive 2.0 discovery, in other words, and not merely moments where we as designers confirm our assumptions. In another example, we learnt that the Greek word Pentateuch has little meaning for the Samaritans. We were advised by the Samaritans to localise the interface with the word Torah. While this example may seem trivial, without the benefit of user-centred design we could have potentially deployed the archive with an entirely incorrect name for one particular stakeholder community. (p. 5)

Similarly, Taylor & Cheverst (2012) collaborated with a rural village in England on an interactive photo display and online archive in the community. They invited active participation and collaboration from community members through brainstorming, prototyping, and designing

display iterations based on participant feedback. Their collaboration with the community, including regular discussions and observations, "led to redesigning the user interface and adding a variety of new features" (p. 29). Although Underberg-Goode (2020) uses a different term, "participatory design," for the process that archive developers employed for the Portal to Peru project interface, the strategies described are similar to those presented by Ridolfo, Hart-Davidson, & McLeod (2010) and Taylor & Cheverst (2012). Namely, "the final site design was determined in collaboration with the women weavers whose work is the subject of the project. This process involved a site visit, focus group discussions, and creation of the website" (p. 120). For the first site visit, Underberg-Goode began preliminary brainstorming discussions with community participants about the site design and focus (p. 121), as well as conducted interviews. In addition, developers held Skype sessions during the year to further consult with community participants about site design and development, "seeking to determine whether and how successfully we were implementing a website that addressed the main concerns outlined in the initial consultations" (p. 122).

Archive Sustainability

In Chapter One, I define archive sustainability as stakeholders using and/or contributing to the archive over time, continuing collaborative relationships if needed, sharing within their existing circles and beyond, etc. Although most authors within this literature review did not address the sustainability of their respective archival project, a few mention the need for building relationships that will sustain joint university/community projects like digital archives. As Allard & Ferris (2015) point out, "archival theory and practice are beginning to take very seriously the integral involvement of communities in the conceptualization, design, and description of their cultural heritage in a sustained and ongoing way" (p. 365). Somerville & EchoHawk (2011)

present one specific failing of *not* involving community participants in the archive development process; for example, an archive previously produced by their university now "remains largely ignored by potential campus and community viewers" (p. 653). The authors suggest that this is due to the university not consulting the community about the archive after initial interviews. Needham & Quintiliani (2016) briefly build upon this need by emphasizing that collaborative community and university relationships and resources are necessary to sustain project growth. In terms of the authors that *do* address sustainability in relation to archive development, Yelmi et al. (2016) suggest that community crowdsourcing is a necessary component of an archive that is used over time: "…we developed membership and contribution functions for the database with the aim of creating a more sustainable collection" (p. 7).

Discussion and Conclusion

This literature review has examined a range of sources about digital archives developed through university/community partnerships. Specifically, I focus upon sources that detail collaborative methods when working with community participants to address specific design challenges. My research question was, "What types of collaborative practices are being used to design community-based digital archive projects?" Based on my review of these articles, I learned that collaborative practices vary regarding the amount of community involvement. Community participants may be included in the outset of a project, contributing oral histories or other materials at digitization events hosted by the university (as mentioned, university students are frequently involved in this process). Interviews and consultations with community participants may be used to gain initial feedback about archive set-up, metadata descriptions, etc. or may be incorporated throughout the archive's development. Although iterative design methods were less common in the projects analyzed for this review, these involved focus groups

at the beginning of the project to discuss the community's archival goals, the facilitation of ongoing conversations with participants for feedback (including when actively prototyping or designing the digital archive site), and revisiting communities for further discussion even after the archive is complete. From this review of collaborative practices, three areas emerged that indicate potential for future study: inconsistency in term use, lack of discussion about archive sustainability, and little to no discussion about designing the archival website.

Inconsistency in term use

As mentioned in the analysis section, the terms used to describe collaborative methods when working with community participants lacked consistency. For example, authors applied various terms to the process of building an archive with community members as well as other participants. *Participatory archive* (De Lange et al., 2010; Brown, 2016), *participatory culture* (Needham & Quintiliani, 2016; Yelmi et al., 2016), *participatory design and research* (Underberg-Goode, 2020), and *community-led participatory archiving approach* (Allard & Ferris, 2015) are specific examples. Understanding varied as to what constituted a "participatory archive" when building the archive itself. Some authors defined a participatory archive as one that crowdsourced materials from all stakeholders (Yelmi et al., 2016; McGrath, 2019) or involved co-creating using other approaches (Needham & Quintiliani, 2016; Yeh, 2016; Harman et al., 2017) such as interviewing community members about their needs and expectations.

In addition, authors differed in what they thought the outcome of these processes would be. For example, multiple authors referenced "reciprocity" as an outcome of archival collaboration, but varied in how they wrote about the concept—whether reciprocity was sharing digitized materials with community members (Needham & Quintiliani, 2016), teaching them to document materials that could be added to the archive (Johnson, 2012), or actively involving

community members in every facet of the development process to give all a voice (Allard & Ferris, 2015). These types of archival projects would benefit from studies that help to develop a language and rhetorical framework for both labeling collaborative methods and the expected outcomes.

Lack of discussion about archive sustainability

As shown in the previous chapter, "sustainability" is a prevalent topic in digital archiving (and indeed, many DH projects as a whole). However, only a few articles in this review address how/if these archives would be used or revisited over time. This is perhaps because most of the archives were only around one to four years old (or less) at the time of publication—likely too soon for the authors to address project sustainability. However, although they do not specifically address how/if their archives were sustainable, several authors mention the need for collaborative community involvement to create sustainable projects (Somerville & EchoHawk, 2011; Needham & Quintiliani, 2016; Yelmi et al., 2016). This raises the question: which collaborative methods may contribute to sustainability? For example, some archival projects offered community participants the chance to add materials over time. Others provided brainstorming and prototyping sessions throughout project development that asked community members to articulate their goals and needs for the archive.

Although any discussion of sustainability may not have been related to the goals or scope of the archives featured in this review, from a broader perspective, the gap regarding what specific collaborative practices may be associated with sustainability re-emphasizes the need to explore archive use by community members over the long-term. As previously mentioned, Ridolfo (2011) suggests that "studying the long-term use (or lack thereof) of digital projects, especially the long-term conversation surrounding projects" can help to reorient how archival

developers approach the design practices of digital archives. With this goal in mind, I suggest that future projects (such as my own) interview members of well-established archives that were created by universities with community participants using collaborative design methods.

Little to no discussion about the design of the archival website

Although the "front end" of archive development (such as the collection of materials) is discussed in significant detail (it is, in fact, the focus of most articles), few describe the design of the interface that community stakeholders will eventually access. There are a few reasons for this: sometimes the website or platform that will host the archive has already been created (perhaps by a library or university center), and the university is simply working within the constraints of existing projects (e.g., Smart & Young, 2013; Thompson & Baugnon, 2017; Hubbard & Ryan, 2018). In addition, one archive referenced by Allard & Ferris (2015) had yet to be developed.

However, authors such as Ridolfo, Hart-Davidson, & McLeod (2010) do present the development of the archive website itself, defining their approach of interviewing community participants, prototyping and revising the interface based on feedback, etc. as "user-centered" and "community-centered" design. Similarly, Taylor & Cheverst (2012) share the same approach of working with and gaining feedback from community members on the archive "user interface" from community members as "iterative design." Underberg-Goode (2020) also presents interviews, focus groups, and ongoing discussions and negotiations with community participants to develop the digital archive interface. The author refers to this process as "participatory design" and "design ethnography" to better the "user experience" (p. 119). Apart from Yelmi et al. (2016) who labeled their process as "user-centered design," but did not actually work with users

on the archive interface, these three sources are the only ones that delve significantly into the development of the actual archive interface.

Indeed, a larger portion of the literature does not mention or describe the development of the archival website. They present the collection of materials, the interviews with community participants, etc., and then include possibly 1-2 lines stating that the archive was designed by a graduate student or team of developers. This is not to suggest that other authors failed to collaboratively engage with community members (at least in the initial stages of archive development). And indeed, some, such as Johnson (2012) *do* describe regular conversations with community partners to ensure that archival goals are "being considered and executed with a balanced effort throughout the project year" (p. 229); however, unlike the three previous examples, these same types of conversations about goals for the archive website are not presented. Without this information, I have additional questions about the usability of the archive: as Ridolfo et al. (2011) point out, "stakeholder communities need particular language, feature, and interface considerations in order for them to effectively utilize [...] archival collections." Do the archive's target users—community participants—have any difficulty accessing the site? Is any language or part of the site navigation confusing? Have their rhetorical goals for the archive been realized in the final product?

Developers are certainly not wrong in collaboratively working with community participants on the front end of archive development. Asking for community member contributions or input in this part of the process is necessary for beginning to realize a collaboratively-designed archive. However, future work should ask developers to build upon and *extend* current methods being used to include designing the final archival website. Authors may

then also write about the process to give other universities the chance to emulate. This can help to ensure that the needs of the archive's target users are being met in the final interface.

CHAPTER 3: Research Methodology

Chapter Two involved analyzing existing scholarship on collaborative design methods used when developing digital archives. The integrative literature review helped to identify how archive developers are talking about/conceptualizing collaborative design practices to address challenges associated with building community-based archives, as well as any potential areas for additional study. The next part of my study is a qualitative case study analysis of interviews with community stakeholders of a select digital archive, the Genoa Indian School Digital Reconciliation Project. By gathering qualitative data from stakeholders using ethnographic methods such as semi-structured interviews, I begin to consider Ridolfo's (2011) call to research community stakeholders from existing archival projects to better understand sustainable design practices (e.g. what do community stakeholders remember/value when collaboratively designing archival projects? What keeps them coming back or contributing to the archive?). In conjunction with this call, the research question that frames this part of my study is:

> **Q2:** What collaborative practices are associated with the sustainability of community-based digital archive projects?

In this chapter, I first describe my research context and share why I selected a digital archive as the focus on my case study, also justifying the use of a qualitative case study design. I provide an overview of my conceptual framework, cultural-historical activity theory (CHAT), and the value of applying this framework to analyze data. I then present my methodology for the study, including data collection and criteria for archive selection, participants and recruitment, and the use of semi-structured interviews. I conclude with a description of my data coding process.

Research Context

To justify a digital archive as my case study focus, remember that, as mentioned in Chapter One, collaboration is inherent within DH work (Nowviskie, 2012; Griffin & Hayler, 2018). During the development of DH tools, resources, or projects, collaborative partnerships may include institutional entities such as libraries (Hockey, 2012; Hubbard & Ryan, 2018; Taylor et. al, 2018), university students (Hubbard & Ryan, 2018), and communities outside the university (Ridolfo, Hart-Davidson, & McLeod, 2011; Taylor & Cheverst, 2012; Mara & Mara, 2015). By exploring a type of DH project that requires critical collaboration among participants outside the university–namely, a community-based digital archive–I argue that we can learn valuable insights about collaborative practices that may be applied to other DH projects–and potentially impact overall project sustainability.

Research Design: The Qualitative Case Study

I selected a case study approach for this particular study because, as Yin (2014) points out, a case study "enables the researcher to answer "how" and "why" type questions, while taking into consideration how a phenomenon is influenced by the context within which it is situated" (qtd. in Baxter & Jack, 2008, p. 556). A case study approach enables me, then, to explore how collaborative practices were used in the design of a specific digital archive, exploring contextual conditions that may have impacted the archive's sustainability. In addition, a case study can provide the groundwork for more extensive research; in the future, I could conduct a more comprehensive survey-based study on what collaborative design practices may be associated with the sustainability of community-based digital archive projects. This exploration of one such archival project, however small in scope, can help to reveal what questions to ask in this type of future research.

Conceptual Framework

When coding datasets, I used cultural-historical activity theory (CHAT) as a conceptual framework to systematically explore collaborative archival design practices. Activity theory, sometimes called cultural-historical activity theory or CHAT, has been "a leading post-cognitivist approach in HCI and interaction design" since the early 1990s and beyond (Nardi, 1996; Kaptelinin et al., 2003; Kaptelinin & Nardi, 2006). Historically, activity theory as we know it now originated in 1920's Russian psychology (i.e. Vygotsky & Leontiev) and was introduced as a theory in the early 1980's. Although there are multiple scholars that define the purpose and components of CHAT, for the purposes of this study, we will use Kirsten Foot's definition due to its clarity and conciseness:

> CHAT centers on three core ideas: 1) humans act collectively, learn by doing, and communicate in and via their actions; 2) humans make, employ, and adapt tools of all kinds to learn and communicate; and 3) community is central to the process of making and interpreting meaning—and thus to all forms of learning, communicating, and acting (Vygotsky, 1978) (qtd. in Foot, 2014, p. 3).

As a whole, CHAT presents valuable implications for design through offering a "language for understanding and making sense of complex real world activities situated in cultural and historical contexts" (Kaptelinin, 2016).

Why CHAT for This Study?

Before delving into why CHAT is an appropriate conceptual framework for this study, I want to revisit why archive developers choose to work with community stakeholders at all during the design process, as well as offer a reminder of what this process can look like. This will help

to showcase how building community-based archival projects with community stakeholders is an activity system, demonstrating how CHAT can serve as a valuable approach to analyzing study data.

As previously explored, challenges can occur overall when practitioners fail to include users in the design process. Stakeholders in different social classes, for example, may "face different situational contingencies because they participate in different parts of the economic system" (Gabrenya, 2003, p. 6). Thanks to poor design, users may be unable to effectively access products and services "where there is inappropriate availability, usability, utility or desirability" (Centre for Inclusive Design, 2019, p. 1). This idea of user exclusion in design is particularly apparent when it comes to situational barriers for users—such as a lack of digital or networked availability. Consider here a personal anecdote from living in a rural area of South Georgia: while attending community college, I remember trying to use a social app for class that was not designed for poor connectivity. There were no parts of the app that could be viewed offline, no optimized images, no pages of mere text that would load faster than the app's flashy audio-visuals. As a user, I was excluded from the app experience (unless, of course, I wanted to drive twenty-five minutes and connect to the internet at my college library).

For the digital archive in particular, avoiding a "one-size fits all" experience for the user is especially necessary since such a project will likely have multiple stakeholder groups/target users bringing different perspectives and needs (e.g. the cultural stakeholders in the community, institutional stakeholders, the general public, etc.). Ridolfo et al. (2011) point out that "stakeholder communities need particular language, feature, and interface considerations in order for them to effectively utilize [...] archival collections." As Jennifer Bowie (2009) argues in her chapter, "Beyond the Universal: The Universe of Users Approach to User-Centered Design,"

usability testing, contextual inquiry, participatory design, and ethnographic methods are valuable ways to include target users in the design process—and hopefully create the kind of language, feature, and interface considerations that Ridolfo et al. (2011) position as necessary for stakeholder navigation of the archive. However, as Bowie (2009) points out, even when designing with users, designers still often reduce the notion of user to one single entity which "does not allow for differences, such as age, sex, culture, education [...]" (p. 145).

One approach that Bowie recommends to avoid universalization in user-centered design is for designers to involve users in the research through a higher level of reciprocity. In one design project, she added this level of reciprocity by "giving the participants multiple chances to negotiate meaning not only during the observation and interviews, but also during data analysis. For instance, I provided the participants an opportunity to respond to and, if necessary, negotiate my findings from their observations and interviews" (pp. 154-155). Jim Ridolfo, William Hart-Davidson, and Michael McLeod (2010) echo this approach, sharing that for the digital Samaritan archive, they would return to community stakeholders during the iterative research and design process for feedback to negotiate meaning. This approach helped to reduce user generalization by gaining a sense of project needs from a variety of users. As previously discussed, a goal of scholarly stakeholders was to create a repository that could be navigated from their institutional collection while the cultural stakeholders, the Samaritans, were primarily interested in a platform that would best showcase their culture through historical texts. The latter offered rhetorical power to user participants from a historically marginalized subculture and is a strong example of putting the "vulnerable user(s)" at the center of the design process—of "iterat[ing], test[ing] and learn[ing] with them to incorporate insights that generate exceptional products and services that are available and suitable for everyone" (Ballantine, Roberts, & Korgen, 2016, p. 23).

Based on the above overview, how can we view the collaborative development of a digital archive as an activity system that may be analyzed using CHAT as a framework? To begin, CHAT "provides a holistic perspective for investigating an entire work/activity system" (Detlor, Hupfer, & Smith, 2018, p. 3), an activity system being composed of a subject, object, tools, community, rules, and division of labor. CHAT has been fruitfully applied to activity systems as diverse as health care systems (Gormley, Kajamaa, Conn, et al., 2020), secondary and post-secondary educational spaces (Trust, 2017; Grimalt-Álvaro & Ametller, 2021), and, as mentioned, human-computer interaction design (Kaptelinin & Nardi, 2012). It has also been used as a valuable tool to analyze similar archival case studies. For example, a study that significantly helped to guide my use of CHAT as a tool for analysis was Detlor, Hupfer & Smith's (2018) analysis of a city-wide digital storytelling initiative in Hamilton, Canada. The project, led by two libraries and one municipal cultural department, involved "the capture and dissemination of digital stories from Hamiltonians concerning significant cultural icons, such as historical figures and events, in various digital formats (e.g., audio, video, text). To enrich and support these stories, a variety of library resources were used (e.g., photographs, archival material)" (p. 44). An archival microsite was also created to allow citizens to view stories, upload their own, and offer comments on the site.

The overall goal of the case study was to better understand the phenomenon of library-led digital storytelling initiatives from an internal stakeholder's perspective, as well as the opportunities that these initiatives offer libraries to engage and lead their communities. For the study, the authors conducted interviews, document review, and participant observation of internal stakeholders. They first used open coding to analyze the data which involves uncovering

categories in the data based on theoretical constructs from the study's conceptual framework (i.e., activity theory). Specifically, the authors asked the following questions of the data:

> i) Who were the subjects of the activity?; ii) what was the object(ive) of the activity?; iii) what motivated subjects to conduct the activity?; iv) did different subjects view the activity and the objectives of the activity differently, and if so, why?; v) what were the goals of the activity?; vi) what actions resulted because of these goals?; vii) who comprised the community associated with the activity and how did community members influence the activity?; viii) what tools, rules, and division of labor mediated the activity and how did they mediate it?; ix) what were the expected outcomes of the activity?; and, x) what contradictions and tensions existed within the activity and how did these contradictions and tensions affect the activity?" (qtd. in Detlor, Hupfer, & Smith, 2017, p. 3).

The authors share that applying activity theory for open coding proved a valuable tool as it "provided a clear structure and vocabulary to describe and assess various aspects of the LYCSYS initiative with regard to motivations, goals, actions, tools, rules, divisions of labor, tensions and contradictions" (p. 5). Through asking these types of questions, the authors found a variety of factors that shaped digital storytelling outcomes—and which could be used to inform future projects. For example, the authors discovered several specific tensions permeating the activity system; while archivists within the project wanted to collect *all* metadata information (such as the details about the photographic and auditory equipment used to record individual stories for the initiative), those gathering the stories in the field were less concerned about this inclusion. The finding indicated the need for deeper communication and the dialogue about

project expectations between archivists and story gatherers in future digital storytelling initiatives.

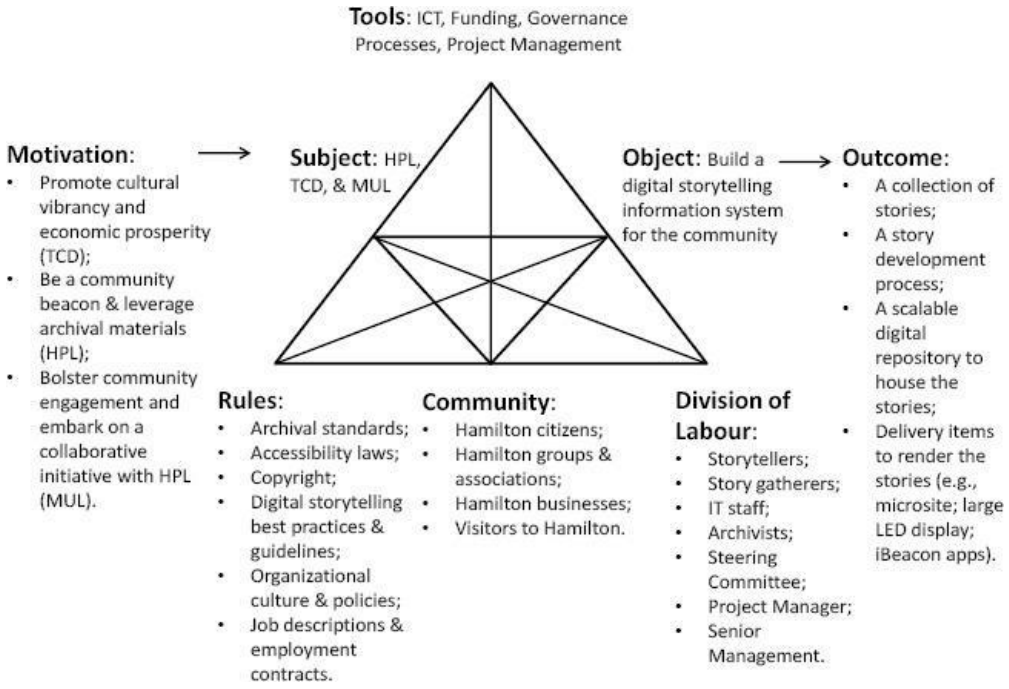

Figure 3.1. The activity of digital storytelling as per this article's case study. **Source: Detlor 2017.**

Like Detlor, Hupfer & Smith (2018), I was interested in identifying the motivations, goals, actions, tools, rules, and divisions of labor existing within and affecting the activity of collaboratively designing digital humanities projects—specifically by interviewing both the project developers and community stakeholders of a collaboratively-designed, community-based digital archive.

For a similar case study analysis of a digital archive like the Genoa Indian School Digital Reconciliation Project, I position CHAT as a "rhetorical force of naming" (Halverson, 2002, p. 247): a descriptive framework that provides "a clear structure and vocabulary to describe and assess" (Detlor, Hupfer, & Smith, 2018, p. 5) the activity system of a community-based digital archive, including what worked/is working *well* in the system. What kinds of outcomes are

associated with specific collaborative design decisions being made by stakeholders? What are the relationship-building moves that archive managers and community stakeholders are engaged in for these projects? Are these collaborative practices associated with overall project sustainability?

Specifically, the concept within CHAT of contradictions and congruencies helps to guide this study. Contradictions are tensions or challenges that arise in the activity that expose dynamics, inefficiencies, and the opportunities for change (Engestrom, 1999), while congruencies work to stabilize the activity and balance any challenges. Through identifying both the contradictions and congruencies in this activity system, CHAT helps to identify practices that may be associated with archive sustainability.

Methodology

Data Collection

For this study, I selected one digital archive, the Genoa Indian School Digital Reconciliation Project, which shares the stories of American Indian children who attended the Genoa U.S. Indian Industrial School in Genoa, Nebraska, as well as the stories of their communities, and the stories of their descendants. My criteria for archival project selection included the following:

- *Community Stakeholders:* Does the archive document a specific culture/community?
- *Long-term use:* Is the archive ongoing or still being used by all stakeholders in some capacity?
- *Collaboration:* Was the archive collaboratively created or designed with community stakeholders in some way? A definition of this type of collaboration for archival projects may include:

- Community stakeholders contributed archival materials
- Community stakeholders were contacted in at least some capacity for input on the project. Examples include:
  - Email responses
  - Surveys
  - Interviews
  - Focus groups

For the selection of the Genoa Indian School Digital Reconciliation Project, criteria were met in the following ways: The archive documents the stories of a historic community, specifically students and their descendants from a controversial Indian boarding school first created by the U.S. government in the 1800's. Project developers share that their aim is to "first digitiz[e] government records of Genoa from various federal and state archives, materials which are often difficult to locate and access. We hope that returning these records to American Indian families and tribes may be an act of archival reconciliation—of bringing history home" ("About the Project," n.d.). The archive was collaboratively developed and designed by the University of Nebraska-Lincoln with the Genoa U.S. Indian School Foundation; Community Advisors from the Omaha, Pawnee, Ponca, Santee Sioux, and Winnebago tribes of Nebraska; and descendants of Genoa students. Archive development has (and continues to) involve community participants in the process, including through preliminary interviews and ongoing conversations. Archive development first began in 2016, and is still used in various capacities by stakeholders today (to be discussed in more depth in Chapter Four).

Participants and Recruitment

Participants included community participants and one archive developer from the university. The first provided key insight into the original development of the archive (e.g. practices used during the design process), as well as how it is currently being used by the university. The second set of participants, community stakeholders, offered a deeper sense of their experiences before, during, and after the development and design process. In order to be a participant in this study, both archive developers and community participants needed to agree to be part of the study; they could not participate if they did not want to be a part of the study or if they were not involved in archival creation/development in some capacity. Participants for the semi-structured interviews were recruited in the following ways:

After receiving IRB approval, I first reached out to the archive developers listed on the Genoa Indian School Digital Reconciliation Project website. I sent a participant recruitment email (Archive Manager Solicitation Email #20850) and also attached the informed consent form (Archive Manager Informed Consent Form #20850) for review. One participant responded, and we scheduled a semi-structured thirty to sixty minute Zoom interview. They were asked to sign the informed consent form on the scheduled day of the interview. During the interview, I shared that the archive developer name as well as the archive title would not be removed from the study as this part was meant to offer helpful background and context about the archive.

I located community participants through the archive website which lists community advisors and partners from the Genoa Indian School Foundation who are (or have been) involved in the project. I contacted all participants via email to request their participation in a semi-structured thirty to sixty minute Zoom interview about the archival design process (Archive Stakeholder Solicitation Email #20850). In this email, I also attached the informed consent form

(Archive Stakeholder Informed Consent Form #20850); exactly five participants responded. Each individual reviewed the informed consent form before scheduling the semi-structured interview. They also signed the form on the scheduled day of the interview. During the interview, I verbally assured all stakeholder interviewees that their confidentiality would be protected through applying pseudonyms to their responses, as well as keeping all data (audio files and transcripts) in a password-protected folder on my personal computer.

No incentives were provided to participate for either group (archive developer and community participants), but I noted that such a study can assist in identifying practices that may be associated with designing sustainable community-based archives, potentially helping DH practitioners when developing future archival projects.

Semi-structured Interviews

For the next study phase after recruitment, I interviewed all participants using a semi-structured interview approach. Creswell (2013, p. 163) conceptualizes interviewing as a series of steps which logically follow from the researcher's chosen research question(s). Rubin & Rubin (2012, p. 37-38) argue that flexible questioning is critical to the success of responsive interviewing. This means that, although my interviews were structured according to my interview protocol, I also included additional questions during the interview in order to invite the participant to respond to specific topics in greater breadth and detail. Using this approach, I interviewed the following two groups:

Archive Creator/Project Manager: This interview (Archive Project Manager Interview Protocol #20850) was slightly different from community participant interviews as it was used to offer context about archive creation itself, any collaborative practices applied during or after the design process, and current archival use and development. Example questions included:

1. Could you describe the background of this project? What was (or is) your role in its development?
2. Who was involved in the design and development of the archive? What did this process look like?
3. Could you tell me more specifically about how community stakeholders were involved in the design process for this archive?

    . What were the practices used?

Community Participants: While acknowledging that there are multiple stakeholders in any DH archive (e.g. university participants, the general public, etc.) whose perspectives are valuable and necessary in the development of a public-facing project with multiple users, for this specific project, I wanted to better understand how we are building collaborative projects with local communities, their experiences, and best practices for creating sustainable projects with these groups. In short, I wanted to step outside of the academic "ivory tower" in a way that Cushman (1996) argues is necessary for the future of higher education. I identify the community for this study as a group that organized to preserve and share their collective history: the Genoa U.S. Indian School Foundation; Community Advisors from the Omaha, Pawnee, Ponca, Santee Sioux, and Winnebago tribes of Nebraska; and descendants of those who attended Genoa. I individually interviewed five participants from this community (Archive Stakeholder Interview Protocol #20850) within the archival project. I offer this number as less than five would not be enough data for rich analysis, while more than ten would likely result in data saturation. Example questions with interviewees (Archive Project Manager Interview Protocol #20850) included:

1. Tell me about your experience working on this archival project.
2. In what ways were you involved when the archive was being designed?

3. What do you specifically remember or value about being part of the archive design?
4. Please describe any ways that you interact with/are involved with the archive now.

Preparing and Organizing the Data

For the interview process, Creswell (2013, pp. 175-6) outlines several approaches for ensuring both ease of access to data and participant confidentiality. First, I collected audio recordings of all interviews. To guarantee accuracy according to Creswell's recommendation, I transcribed all interviews within 48 hours. All data was stored as a digital file in a private Google Drive folder; the recording and transcript of each interview was available to each interviewee upon request. For the transcription process, I removed filler words such as "Oh," "Um," etc. to make the files more concise, and to prepare for analysis. During this step, I also removed names and identifying markers (e.g. workplaces) to protect participant identity. I then uploaded the transcripts into Quirkos, a software package designed for the qualitative analysis of text data.

Coding Process

For the analysis, similar to Detlor, Hupfer & Smith's (2018) study, CHAT provided a guide. For example, I first used open coding which "involve[s] discovering categories in the data based on theoretical constructs from the study's conceptual framework (i.e., activity theory), as well as thoughts elicited by participants and insights from the researchers themselves" (p. 50). Using CHAT to frame my open coding, I asked multiple questions of the interview data, including, "Who were the subjects of the activity? What tools, rules, and division of labor mediated the activity? What contradictions and tensions existed within the activity and how did these contradictions and tensions affect the activity?" I used Quirkos to highlight words, phrases,

or paragraphs that responded to these questions; I also began to assign labels to recurring ideas and patterns.

Theming the Data

Following the coding process, I identified, defined, and synthesized emerging themes within the codes, also identifying where certain themes overlapped and could be grouped together. I revisited the data multiple times to reevaluate my analysis, memoing any assumptions that I seemed to be making to reduce bias, and refining themes accordingly. Three key themes emerged as a result of this study.

Interpreting the Data

After finalizing all themes that emerged from coding, I began to interpret the data. I first summarized findings through the lens of the CHAT questions used as an analytical framework, helping to showcase the archive's development as an activity system, and also identifying any contradictions and congruencies in the activity. I then narrated the key themes, sharing contextual descriptions and direct quotes from interviewee experiences to illustrate any collaborative practices that may be associated with the sustainability of this particular community-based digital archive project.

CHAPTER 4: A Case Study Analysis of a Community-Based Digital Archive Project

I was glad that I participated, even if I couldn't participate all the way through. Because I think the initial process was to lay the groundwork and develop the system and all that type stuff was very tribal oriented. And I think that we were able to get in our thoughts and our processes into the project.

In my integrative literature review in Chapter Two, I discuss collaborative practices that practitioners are using to design community-based digital archives. I also present the emphasis in analyzed literature on the need for creating sustainable projects. Although few authors discuss what practices might lead to archive sustainability, several mention that collaborative community and university relationships and resources are necessary to sustain project growth. To explore what specific practices may be associated with archive sustainability, in this chapter, I present a case study analysis of a collaborative, community-based digital archive project, specifically the Genoa Indian School Digital Reconciliation Project: a digital archive collaboration between the Genoa U.S. Indian School Foundation, Community Advisors from the Omaha, Pawnee, Ponca, Santee Sioux, and Winnebago tribes of Nebraska, the University of Nebraska-Lincoln (UNL), and descendants of those who attended Genoa. For context, according to the archival site, the school has a complicated history for community stakeholders:

> The Genoa U.S. Indian Industrial School in Genoa, Nebraska, began in a one-room schoolhouse that the United States had originally built on the Pawnee reservation as part of its treaty obligations. After the Pawnees were pushed to Indian Territory (today's Oklahoma) in the mid-1870s, the United States converted their school into the Genoa School. Eventually Genoa became a sprawling 640-acre campus with over thirty buildings. During its fifty years of operation from 1884 to 1934, the school enrolled over 4,300 children representing over forty Indian Nations. […] Authorities designed the

> schools to "kill the Indian to save the man," as Captain Richard Henry Pratt, the founder of Carlisle Indian School [the flagship Indian boarding school founded in Pennsylvania], put it. [...] Memoirs and oral histories of attendees reveal that boarding schools gave some Indian children new opportunities and also subjected many to harsh discipline, abuse, and exploitation. Diseases such as tuberculosis spread quickly in the over-crowded schools, and death rates were high. Cemeteries were a standard feature of the schools. ("About Genoa and Indian Boarding Schools," n.d.)

The archive currently houses digitized government records from various federal and state archives, including letters, telegrams, and enrollment lists. This project began as a collaborative partnership in 2016 between the Genoa Indian School Foundation, tribal members, and UNL to digitize and preserve existing records within an online content management system. The overall archive goal is to "bring greater awareness of [Indian boarding] schools and their legacies at the same time as it hopes to return the histories of Indian children from government repositories back to their families and tribes" ("About Genoa and Indian Boarding Schools," n.d.). I use this case study research to explore my second research question:

> **Q2:** What collaborative practices are associated with the sustainability of community-based digital archive projects?

In this chapter, I first present my findings from the interview analysis, including a summary of archive development as framed by an activity theory model. My summary includes an overview of both contradictions and congruencies in the activity that both identify and help to

stabilize opportunities for change. I conclude with a discussion of key themes and implications from the study, as well as a brief overview of Chapter Five.

Figure 4.1. Home page of the Genoa Indian School Digital Reconciliation Project.

Figure 4.2. Home page of the Genoa Indian School Digital Reconciliation Project.

The Activity System of the Community-Based Digital Archive

As mentioned, I use Engestrom's (1999) activity theory model as an analytical lens to summarize findings. According to Engestrom, an activity system is composed of a subject, object, motivations, goals, tools, rules, and division of labor. The subject is the person or group of people participating in the activity being studied. The object is the motivation(s) that the subject has to complete the activity. To achieve an object, the subject uses tools which can be

both “physical artifacts (e.g., technology) and cognitive signs (e.g., memory, language, skills)” (Detlor, Hupfer, & Smith, 2018, p. 47). Rules such as norms, regulations, and conventions guide the activity, while the division of labor is how labor is divided among participants. As mentioned in Chapter Three, one central component of activity theory that guides this study is the concept of contradictions and congruencies. Contradictions are tensions or challenges that arise in the activity that expose dynamics, inefficiencies, and the opportunities for change (Engestrom, 1999). In contrast, congruencies work to stabilize the activity and balance any challenges.

For my study, the central activity being investigated was the development and design of a community-based digital archive in collaboration with a university. The subjects were tribal members (including school descendants), the Genoa Indian School Foundation, and university participants. The object of the activity was to create a space for telling the stories of the children who attended Genoa, and the stories of their communities and descendants. What motivated subjects to conduct the activity? Tribal members share that they were motivated to engage in the archival project to share their story more broadly and to create a space for accessible records of their collective history. The Genoa Indian School Foundation was also motivated by a desire to both broaden access to historic materials, as well as transition records into a digital space for preservation. UNL’s motivations included historic preservation, facilitating stronger partnerships between the university and community participants and, later, fulfilling the requirements of grants awarded to the project.

Interviewees identified multiple goals for the activity that reflected these motivations. For tribal members involved in the project, the goal was to preserve historic materials and narratives for future generations, and to offer a database to access these materials. As one explained, “We need to preserve a lot of stuff for the future because it tends to get lost.” The Genoa Indian

School Foundation shared that goal. Since they often receive requests from descendants wanting information about their ancestors, one of the Foundation's goals was to expand the database:

> We can use what information we have, and look up and give to them. And then we also refer them to the website of the digital projects so that they can do some more looking on their own. And there is some information there that we do not have at this time on ours.

As shown above, another goal of the Foundation was to specifically create a digital archive, so they can both "look up" and help others "look on their own." Finally, the goal of the university was to facilitate partnerships among stakeholders and create a digital space to preserve historic records from the school.

There are several tools, rules, and divisions of labor mediating the overall activity. First, roles vary among participants within divisions of labor. The earliest work in this area began with the Genoa Indian School Foundation in the early 1990's. The labor of collecting material records and histories from descendants was largely thanks to the Foundation. For the digital version of the archive, UNL is the primary facilitator. According to one participant:

> [A UNL representative] came out to one of our reunions and felt that this would be a good project for if [they] could get a grant and to set it up, so that we could have this information online. So that's kind of the start of the digitization project. [They] had invited all the different representatives from the tribes.

After initiating the digital archive and receiving funding, UNL team members also presented archival elements for discussion (such as what content management system would be used), and have facilitated ongoing meetings to talk about archive updates. Both the Genoa Indian School Foundation and tribal representatives on the Community Advisors Council offer information about what types of resources and materials that descendants are interested in locating, what to include in the archive, as well as their thoughts on site design (such as visuals and language used to describe materials). As one stakeholder shared, "So a lot of that [set-up and design]–we relied upon project managers to do that. But we were included in whether we thought this should go

this way, or do it a different way." Tribal stakeholders also seem to facilitate the most archival site traffic as they direct school descendants there as a resource.

Rules are fairly expected for this type of community-based digital archive. Tribal members and Foundation participants provide input on the materials, language, visuals of the archive website, etc. while university participants facilitate these discussions and overall project development. Any materials included on the archive need to respect participant wishes for what should be shared. Tribal members are typically less concerned with the "user-centered-ness" of the site and more focused on historic materials being available online to descendants, so all materials need to be accessible for review by users. Archive design has to follow any limitations of the selected content management system, Mukurtu.

Multiple tools also mediate the activity. Communication tools enable collaboration among all participants in the project, including staff from the Genoa Indian School Foundation, tribal representatives, and university archival project managers. Unsurprisingly, basic communication tools such as emails and phone calls were used to contact participants about initial interest in the project, and later to facilitate meetings. The in-person meetings and Zoom calls occur quarterly to discuss archival development and dialogue about archive direction and next steps.

Another tool is project funding. Grants awarded by organizations such as the Council on Library and Information Resources (CLIR) and the National Endowment for the Humanities (NEH) allow UNL to support researchers, including graduate students, in compiling and digitizing records and other materials from the school. At the beginning of the archive design, the funding was also used to hire a Native artist to create site visuals (e.g. a logo and Native art backgrounds) that reflected tribal wishes for how the site should look. However, grant

restrictions also occasionally limited what university participants could use from the Foundation archive.

Figure 4.3. Genoa Indian School Digital Reconciliation Project logo by Henry Payer.

Finally, an open-source platform, Mukurtu, designed for indigenous communities to share and manage their digital heritage, houses records and other materials. This was a choice by university project managers that was approved by tribal participants, but also sometimes limited the project, as I will share in the section on Contradictions and Congruencies. Indeed, as we will see below, several tools, rules, and divisions of labor created limitations and contradictions in the project, as well as opportunities for change.

Contradictions and Congruencies in the Activity

Several contradictions existed within the activity of collaboratively designing the archive with various participants. These contradictions reveal "the dynamics, inefficiencies, and, importantly, the opportunities for change within an activity" (Detlor, Hupfer, & Smith, 2018, p. 49). Based on interview responses and analysis, I identified three primary contradictions in the

activity: 1) Institutional Infrastructures; 2) Complexity of Representation; and 3) Participant Agency.

Institutional Infrastructures

The activity of collaboratively developing the archive with participants is sometimes limited by restrictions created by a) funding and b) choice of archive platform. First, over the project duration, funding has been awarded through grants from both the Council on Library and Information Resources (CLIR) and the National Endowment for the Humanities (NEH). In the first year of the project, UNL initially planned to digitize the existing research collection from the Genoa Indian School Foundation; participants from the non-profit had been collecting information and oral histories from former students since the early nineties, as well as housing hundreds of photocopied materials from regional archives. As several participants shared, however, the existing collection largely did not meet grant requirements as, according to guidelines, materials needed to be pulled from federal sources:

> So most of the first year, we were going to archives digitizing material, bringing it back and doing basic image processing. [...] So I would say we didn't really get heavy into the design elements until definitely after the first year of the grant. And that's because we were spending so much time getting the material and getting it ready to actually be imported into the content management system.

Therefore, funding requirements created initial limitations on how UNL and GISF could collaborate on the project but, as I will later review in this section, the tension also led to a congruency thanks to the ongoing partnership between the two organizations.

Second, Mukurtu, the content management system selected by university project managers to house the archive, sometimes limits collaborative design. The digital development manager and designer for the project shares, “Mukurtu is a system that's fairly limited in how I can do the design. [...] With Mukurtu, I had to really kind of fit [the placement of Native

artwork] in the existing architecture a lot more. So it's a little tricky, because [the Native artist] would be like, 'Can you do this?' And I'd be like, 'I don't know if I can do that.' I'd have to like, click around a lot. Figure it out." In addition, while Mukurtu has the capability for participants to add their own materials, a project associate has been adding all records so far, and has encountered some difficulties. As the digital development manager and designer states, "I think there has to be some training for people to add items on their own in order to use it correctly, just because there's a lot of fields and they have to figure out where to put what. So I think that part is ongoing." Other participants affirm the ongoing nature of the challenge; however, there is a related congruency that I will later discuss.

Complexity of Representation

As mentioned, the archive community includes tribal representatives, the Genoa Indian School Foundation, and UNL; although a variety of participants have worked together on the project, multiple participants identified the complexities of representing all voices, including those outside the community. While tribal representatives from the Omaha, Winnebago, Santee, and Ponca tribes joined the project to collaborate on archive development and design, an identified tension surrounded other tribes not being present in the conversation. One participant elaborates that, "We heard from a woman from the Navajo nation who was—she was a little upset that some people who were in Nebraska are the ones who are sort of making decisions about how the [school] material should be handled on behalf of all the nations." The comment showcases the complex (and ongoing) challenge of considering whether the project should be opened to a larger group of participants to more fully represent all voices.

In addition, a tension between the academic versus non-academic perspective (and who is being represented) exists. One participant states that, although university participants have

recently asked more diverse voices to join the university team since project inception, “it's kind of, in my opinion, to give more credit, street cred, to their project,” noting that these voices are still largely representative of the academic perspective.

Participant Agency

Another contradiction involves the agency (or lack thereof) among participants when deciding on archival access. One participant shares that, while the process of working with the university has been positive as a whole, the conversation sometimes seems driven by “the dominant society, the academic perspective,” thus limiting the agency of other participants. For example, at the onset of the project, university participants believed that any sensitive data in the archive that could perpetuate negative indigenous stereotypes should be restricted–a perspective confirmed by speaking with academic participants from tribes. In fact, a primary reason that university participants adopted Mukurtu as the content management system is because of its capability to restrict data. The system allows users to set protocols in place so that cultural artifacts that are on the website or in the management system can only be accessed by certain members who were at the different protocol levels. University participants were originally “really attracted” to this feature based on their understanding of how tribal participants felt about curating the sensitive data. However:

> ...What we found when we had the very first community advisory meeting [...], the community advisors who were elected officials from the headquarter tribes in Nebraska, and not academics, is that they did not want the things, the cultural artifacts, to be locked down.
>
> [...] And we presented to them some of the most sensitive—some of the documents from the school officials are just—they're really bad sometimes. They're just saying terrible things about the children. We took a sample of the documents and had them look at them and say—the way that I presented it to them when we had the meeting was: this content management system could be like a house, and there are certain rooms in the house that maybe we want to have doors on them. And then maybe you want those doors to lock. And maybe we don't want to have any locks on the doors. And at the end of that

> presentation, they were really strongly against putting any kind of locks on the door, so to speak.

The discussion of archival "locks" above reveals a tension: university participants did not originally realize their assumptions about the projects goals of other participants and whose voices were central to the project. These assumptions could have left some participants feeling underrepresented and undervalued in archive development, impacting long-term archive use and participation from non-academic tribal members.

However, although various contradictions sometimes challenge the activity of participants collaboratively developing the archive, there are also congruencies that "counteract changes to activity systems brought about by contradictions. That is, contradictions challenge activities, while congruencies help stabilize them" (Detlor, Hupfer, & Smith, 2018, p. 49). I identified two primary congruencies in the activity; that is, 1) Ongoing Dialogue: Enhances Archive Design and Development and 2) Facilitates Less Visible Channels of Sustainability.

Ongoing Dialogue: Enhances Archive Design and Development

As the project progresses, the ongoing dialogue among participants enables them to consider user needs for the archive and also work through any challenges. For example, when archival development first began, a participant points out:

> One thing that we discovered [...] was that a lot of the most important design aspects actually happened, just in discussions with the community advisors, not in terms of the technology. So it was really about—the community building was really central to thinking about how the advisors thought that members of the community would want to use the product. I don't know if that's what you consider to be design, but it was happening off-line. A lot of it was.

This process of community building helped to reveal incorrect university assumptions about how data should be shared. One participant notes that a primary discussion topic was: "What do we want to have on the website as far as how much do we want to be accessible to the public versus

the Native people that were descendants?" Although university participants initially leaned toward the academic perspective to restrict data (a contradiction from the previous section), through ongoing dialogue, they discovered that the majority of participants wanted to publicly share all archive materials. As one participant states: "If we're talking about being truth seekers, we can't now try to cover up and pick and choose what we're going to tell."

In addition, for the development of the archival website, tribal participants worked through describing material, brainstorming site structure, and offering the cultural perspective on the layout. One participant remarks that the initial design presented by the university "just had this blah wallpaper look to it," so participants shared that they would like to see Native art represented on the site. They selected a local Native artist known to several community advisors, "and it really added, you know, that feel to the whole project that made us feel like it reflected us as people." Another participant echoes that tribal representation on the site was informed by meeting discussions: "One of the things I commented on when we were looking at the website is if we could have like an acknowledgement of tribes or maybe even including tribal flags on there. So it was kind of feeling out what the website—the end product would look like."

The ongoing relationships and conversations have also created awareness that changes may eventually need to be made regarding choice of content management system. The digital development manager and designer shares that there were parts of the design that tribal participants did not necessarily love, but that she could not adjust because of the system. Although she was able to tweak the design so that they were eventually satisfied with the result, there are other aspects of Mukurtu that may not support community goals for the project. For example, there is interest in school descendants being able to download archival data in bulk for personal use, but she is not sure if Mukurtu currently has that capability.

Ongoing Dialogue: Facilitates Less Visible Channels of Sustainability

Although sustainability is often defined as simply the continued use of the archive by stakeholders, participants revealed another, less visible channel of sustainability: the impact of relationships among all participants. These relationships, strengthened by ongoing conversations in meetings, enable them to consistently address challenges, make adjustments, and consider new ways to approach the site. One participant points out:

> I had asked some questions about–do we have any way of finding out about suicides, or sexual assaults? And I really wanted them to try to drill down more on that, but they hadn't been able to. Now since the summer, we found some more records of agents that showed up back in the early opening of the school in 1884, that there were clusters of children that died. And so more's coming out, I think the archives are incomplete yet.

The archive is, as another participant put it, a "living document" that is continually being built through ideas shared in project meetings. The ongoing relationships and conversations spark ideas for ways to approach school history that may fall outside the scope of the original archival project.

Discussion

While exploring what collaborative practices are associated with designing sustainable community-based digital archive projects, I made both expected and surprising discoveries. Unsurprisingly, I found that all participants seemed to appreciate being involved in initial conversations about archive development, including which content management system should be selected for the archive, and what language should be used to describe records. However, I also encountered several new findings. In this section, I summarize key themes found in this study, including *Theme 1: Conversation Sustains the Archive*, *Theme 2: Representation is Vital for Sustainability, but Complex*, and *Theme 3: Sustainability is a Launchpad for More*. I also discuss implications from these findings.

Theme 1: Conversation Sustains the Archive

Throughout interviews, participants consistently point to ongoing archival meetings as the primary reason that the archive is revisited or stays at the forefront of conversation in their circles. Indeed, for this project, sustainability is a social system of relationships. Although they did desire site visuals or graphics that represented different tribes, participants are typically less concerned with the set-up or design of the site so much as they are interested in sharing new findings, presenting ideas for approaches to the archive in the future, and ensuring that all records are accessible to descendants in the database. This is not to imply that conversations are without friction. As presented in the section on Contradictions and Congruencies, participants sometimes express frustration with whose voices are being elevated during archive development (e.g. "the academic perspective"). In addition, the content management system occasionally restricts how data can be shared. However, these challenges are consistently brought up within meetings. While perhaps not always solved, the conversations enable participants to continue working through tribal representation on the site, how or what materials should be included, or new ideas for the archive moving forward.

The implication here is that sustainability is a collaborative and ongoing conversation–a social system of relationships designed to continually work toward the rhetorical goals of stakeholder participants. Based on this finding, communities and universities working together on similar digital archival projects should be mindful of the power of facilitating at least semi-regular conversations among participants.

Theme 2: Representation is Vital For Sustainability, But Complex

Multiple participants express appreciation for the project's aim to clearly and accurately represent tribal descendants on the archive, as well as involve as many voices as possible in

sharing input about the archive itself. Their comments suggest that their interest in staying involved and contributing to the archive is largely due to feeling both valued and represented on the site and in discussions. However, while representation is arguably key to sustainability, participant reflections emphasize the complexities involved in this process. As discussed, while the archive includes the input of multiple tribal representatives, some outside of the project expressed frustration that more tribal perspectives from outside Nebraska are not involved. In addition, some groups within the project may feel as though their views are not fully being taken into account during archival discussions (e.g. the academics vs. non-academics), limiting participant agency and creating conflicts over representation.

In terms of implications, representation is clearly a complicated (and ongoing) challenge when developing and designing these types of digital archives. As the project's digital development manager and designer shares,

> You just constantly have to be in conversation with as many different people as possible. Because sometimes you just can't see that you're making assumptions and/or that you're taking one group's word as if it's representative of everyone's word. And it's not. It's a really complex process.

With the complexity of this process in mind, participants should not feel discouraged when undertaking community-based digital archive projects. Rather, both communities and universities may acknowledge the necessity of ongoing conversations to work through potential challenges surrounding representation. While it may be difficult (or even impossible) to fully represent every participant within an archive–whether on the site itself or within project discussions–managing representation thoughtfully and working toward this goal is vital toward the overall health of the project.

Theme 3: Sustainability is a Launchpad For More

One unexpected finding is that sustainability may not be the ultimate outcome of a successful archive. For example, the Genoa Indian School Digital Reconciliation Project first began as an in-person reunion and oral history collection project through the Genoa Indian School Foundation. This group facilitated the development of a material archive, providing a foundation for the eventual digitization of materials and digital archive. The entire project has a history of growth. Similarly, interviewee responses suggest that the archive is not just about sustaining the original project, but *growing* and expanding the range of possibilities. Participants may be asking questions like, *What's next? How can we reach the next step?* This is, of course, not to say that the archive cannot serve and fulfill original goals: for this project in particular, a primary goal was making the stories of the school attendees accessible to descendants. As one participant shares,

> Basically, the website is an ongoing resource for us when we're conducting research, or when a tribe member comes in and is interested in learning more about their relatives. Because once we have that family name, we can look that up in the database. And that's pretty meaningful for so many people just to have that. Be able to have a connection to somebody who went to the boarding school. And you have to keep in mind that things on the reservation--just because of the nature of families and trauma and social issues, there's not a ton of family archives, or people who keep big records on their family, right? So this is able to open that up and really give a window and see things that family member signed and worked on and wrote and even letters. So it's very cool.

However, in addition to accomplishing the initial goals of participants, the archive is also helping to facilitate other projects, serving as a launchpad for more. For example, some participants are currently participating in outside discussion and work surrounding the Genoa School's inclusion in a national boarding school database: "that's just a very, very exciting thing in the future, because not all boarding schools have their records online." In addition, another form of growth for the archive is making data accessible in open formats separate from the rest of the website.

For example, the project is going to be making downloads of the data available so that users can access in bulk: “So it's very—this is the data, this is the important part. People obviously want a website so that they can browse it, but a website will last 10, 20, maybe 30 years, probably more like 10, before it has to be completely redone. But hopefully, that data will be able to last for a lot longer without changing it.”

An implication for developers of similar community-based digital archives is to remember that, while archive sustainability is important, growth is also part of a successful project. What types of conversations are being facilitated to enable future projects–projects that may expand beyond the scope of the original archive? Further study might involve how archive stakeholders are talking about projects in the long-term, including what types of growth or new discussions or participation have occurred thanks to the original project.

Conclusion

This chapter has reviewed the types of collaborative practices that may be associated with overall project sustainability, including intentional, ongoing conversations among participants that can help to resolve or push against design challenges (such as tensions created by the complexity of representation). In addition, I found that archive sustainability may not always be viewed as the final goal: instead, project growth that moves beyond the goals of the original archive may be part of a successful outcome. The next chapter will present an overview of the entire dissertation study, compare findings and themes from my first and second research questions, and also discuss recommendations to both digital archive and other DH projects moving forward.

CHAPTER 5: Conclusion

The purpose of my research was to analyze how community-based digital archive projects are being collaboratively designed with community stakeholders, as well as which of these practices may contribute to archive sustainability. In a larger context, my study aimed to build upon existing knowledge in both digital archive studies and the Digital Humanities (DH) by promoting transparent discussion of design practices situated within these types of projects, and also identifying potential strategies for developing sustainable archives in a way that may inform other DH projects. I was guided by the following research questions:

Q1: What types of collaborative practices are being used to design community-based digital archive projects?

Q2: What collaborative practices are associated with the sustainability of community-based digital archive projects?

In this final chapter, I describe the overall findings associated with Research Question 1 as well as Research Question 2 from my integrative literature review in Chapter Two and case study analysis in Chapter Four; I then offer recommendations for developing future community-based digital archives with communities. I then discuss the research limitations of my work. I also explore what my study contributes to DH as a whole–what value it adds to the field–and present several ideas for future research that extend beyond the scope of this dissertation. This chapter concludes with a fictitious example of working on a community-based digital archive with participants: a narrative revisited from Chapter One now built upon to reflect collaborative practices learned from this study.

Overall Findings

Chapter Two reviewed collaborative methods used by archive developers to address specific archival design challenges associated with building community-based digital archives, including *reciprocity and stakeholder representation*, *community ownership and rhetorical sovereignty*, and *archive sustainability*. When addressing the challenge of *Reciprocity and Stakeholder Representation*–of creating some type of reciprocal relationship and representing *all* participant voices during archive development–universities often involve both undergraduate and graduate students to: collect interviews from community participants, digitize materials, or conduct research and write metadata descriptions with participant input (Yeh, 2016; Thompson & Baugnon, 2017; Hubbard & Ryan, 2018; Johnson, 2018; McGrath, 2019); actively prototype or design the digital archive site (Underberg-Goode, 2020); or work on a combination of these methods (Smart & Young, 2013; Harman et al., 2017; Needham & Quintiliani, 2016). One problematic aspect of this approach: students are often positioned as gaining the most value from the relationship. However, a few articles suggested a main purpose of their respective archives was to create a reciprocal relationship and represent all stakeholders (De Lange et al., 2010, p. 160), as well as involve community participants in archive development through conversations, focus groups, etc.

Other themes were present, but less frequent. For example, several approaches emerged in the literature to encourage *Community Ownership and Rhetorical Sovereignty*: interviews, metadata consultation, and ongoing discussion with community participants throughout archive development. Although few articles mentioned collaborative practices that could potentially facilitate *Archive Sustainability,* several emphasized that collaborative practices are needed even after the archive development is underway. Somerville & EchoHawk (2011) suggest that, by not

involving community participants in the archive development process after initial interviews, an archive previously produced by their university now "remains largely ignored by potential campus and community viewers" (p. 653).

Overall, the integrative literature review helped to both 1) answer my first research question by identifying the current collaborative practices being used to design community-based digital archives and 2) present gaps for additional research. For example, inconsistencies in term use suggested the need for future studies that help to develop a language and rhetorical framework for labeling collaborative practices and the expected outcomes. More specifically for my project, however, I identified two gaps in literature that my case study analysis could begin to fill. Namely, I found a need for discussion about how the archival website or content management system was designed. As mentioned, without this understanding, questions arise regarding the archive's usability since, as Ridolfo et al. (2011) point out, "stakeholder communities need particular language, feature, and interface considerations in order for them to effectively utilize [...] archival collections." Do the archive's target users—community stakeholders—have any difficulty accessing the site after completion? Is any language or part of the site navigation confusing? Have their rhetorical goals for the archive been realized in the final product?

In addition, I found a lack of discussion surrounding practical strategies to facilitate archive sustainability. Granted, as I point out in Chapter Two, discussions about sustainability may not have been directly related to the goals or scope of the archives featured in the integrative review; however, from a broader perspective, conducting a study that explores specific collaborative practices associated with sustainability can help to fill a particular gap. To once again reiterate Ridolfo (2011), "studying the long-term use (or lack thereof) of digital projects,

especially the long-term conversation surrounding projects" can help to reorient how archival developers approach the collaborative practices of developing and designing sustainable digital archives. I framed my case study in Chapter Four around this study goal, and interviewed members of a well-established, community-based archive, the Genoa Indian School Digital Reconciliation Project. I then analyzed data using CHAT as a descriptive tool: how did participants currently use the archive? How did they talk about their experience in collaboratively developing the archive with the university? What were contradictions experienced in the activity of creating the archive? This analysis led to unexpected findings.

For example, in Chapter One, I originally defined archive sustainability as stakeholders using and/or contributing to the archive over time, sharing within their existing circles and beyond, and continuing collaborative relationships *if needed*. However, what I learned from my case study is that sustainability was a social system of relationships working toward the rhetorical goals of stakeholder participants through ongoing conversation. Facilitated, semi-regular conversations among participants range from thinking through new archival additions to ideas for how material can be used outside the scope of the original project; whatever the topic, these conversations serve to continue university/community relationships as well as archive development. This finding demonstrates that, for this particular case study, collaborative relationships are not merely an "if needed" aspect of the process, but a vital component.

In addition, I found that working through representation in these conversations is necessary, but can be complex with tensions arising over who should be involved from different stakeholder groups, whose perspectives are viewed as being "elevated," etc. However, as a whole, I learned that discussing community goals for the project and creating an archive that represents input from varied participants can create a sense of community ownership and

ongoing participation that can help to sustain community use of the archive. As one participant put it:

> Basically, the website is an ongoing resource for us when we're conducting research, or when a tribe member comes in and is interested in learning more about their relatives. Because once we have that family name, we can look that up in the database. And that's pretty meaningful for so many people just to have that, to be able to have a connection to somebody who went to the boarding school. And you have to keep in mind that things on the reservation--just because of the nature of families and trauma and social issues, there's not a ton of family archives, or people who keep big records on their family, right? So this is able to open that up and really give a window and see things that family member signed and worked on and wrote and even letters. So it's very cool.

The quote, among others from the study, is significant because it indicates a sustainable archive: one that is being used and discussed in the long-term by community stakeholders after being involved in collaborative practices such as ongoing conversations throughout archive development (and beyond). This answers my second research question about what types of collaborative practices are associated with the sustainability of community-based digital archives.

Finally, my study revealed that growth, not just sustainability, may be viewed as a successful outcome of a community-based archival project. The same ongoing conversations that facilitate strong community/university relationships can enable future projects that fall outside the scope of the original archive. An example project includes records from the community-based digital archive being added to a national database:

> There's discussion now and work going into a national boarding school database. I think it's by the same—they're kind of collaborating with the same folks who made this, or at least they're getting their consent to upload what they have into this national database. I haven't heard any specifics of when it'll be out. But it's– that's just a very, very exciting thing in the future, because not all boarding schools have their records online. In fact, I think Genoa and Carlisle [an online database similar to the Genoa project] are kind of two outstanding examples where things are really accessible.

Recommendations

Based on my findings, what specific actions can both community stakeholders and university practitioners take to develop sustainable, community-based digital archives? To begin answering this question, I have written a general list of recommendations that groups may begin to follow. This is, of course, not a comprehensive list, but does speak to applying the collaborative practice of ongoing conversations with all involved:

- **Draft a working calendar early on with set times for stakeholders to meet.** In the integrative literature review, I found that only two out of 17 community-based digital archive projects facilitated ongoing meetings. For the other projects, meetings among stakeholders only occurred during the early stages of project design/implementation. Although the Genoa Indian Digital Reconciliation Project initially conducted interviews and meetings with community participants to begin developing the archive, every interviewee pointed to the semi-regular meetings and conversations throughout the duration of the project as being the setting where they feel the most representation as a group, and can work to establish community ownership and rhetorical sovereignty. This finding suggests that much more longitudinal collaboration is needed for similar

community-based digital archive projects. Participants may assemble at a kick-off meeting to discuss how often the group should meet to discuss archive direction: bi-annually? Quarterly? This calendar may be revisited, but can begin to establish ongoing relationships as the archive develops, as well as create a sense of stakeholder control over the project.

- **Establish and revisit rhetorical goals during these conversations.** In Chapter Two, I found that community-based digital archive projects included little to no discussion about the design of the final archival website; I questioned the impact this might have upon community participant experience with the interface. Stakeholder communities do need "particular language, feature, and interface considerations in order for them to effectively utilize [...] archival collections" (Ridolfo et al., 2011), but based on the findings from this case study analysis, I learned that establishing "big picture" goals and having ongoing conversations about these goals may be the best way to realize a user-centered website. While community participants from the archive are not always interested in the minutiae of website design outside of overall visuals, language, etc., they may have very specific goals for what they want the archive to accomplish and who they want the archive to serve. For example:
    - Who is the primary audience of the archive?
    - Are archive records open to the public or restricted to the community?
    - Are records easily accessible to these same community participants for download?

Understanding the rhetorical goals of the community early on can help developers to begin designing an archive that meets these goals in the layout, how records are

structured, etc. Developers should keep in mind that these goals may change over time, but that ongoing conversations with community participants can help to identify and respond to any shifts in archive goals. In addition, although community wants and needs should be primary, the university should also be upfront and realistic about sharing their goals for the project and limitations. For example:

- What is the purpose of the project for university participants?
- What is the role of external funding for the project? E.g. Are university participants working to satisfy the requirements of a grant?
    - If so, what is the plan when project funding ends? Who will manage the archive over time? How (or will) it be updated? Are there grant restrictions that community participants should be aware of?

- **Welcome the opportunity to discuss challenges.** For both community and university participants alike, be aware of the complexities of representing stakeholder voices and ensuring reciprocity for all involved. Tensions that arise from working with multiple stakeholder groups should not be side-stepped, but rather addressed and pushed against during ongoing meetings (such as whether certain perspectives should be added to the project). While problems may not always be immediately (or easily) resolved, actively working through tensions can facilitate trust for all stakeholder groups.

- **Consider CHAT as a framework to build collaboration.** In addition to analyzing or diagnosing disruptions to collaboration after a DH project has already been created, CHAT may be used as a framework for developers and community participants to reflect on how a collaboration is going. Participants may create a checklist to ask CHAT-specific

> questions about their specific DH project: e.g. "What tools, rules, and division of labor are mediating the activity and how are they mediating it? What are the expected outcomes of the activity? What contradictions and tensions exist within the activity and how do these contradictions and tensions affect the activity?" (qtd. in Detlor, Hupfer, & Smith, 2017, p. 3). Through answering these types of questions, developers and community participants can articulate the object of the activity, tools available, rules, community, divisions of labor, as well as any challenges and how participants are navigating those issues. These tools may be used to analyze the activity system to see how to approach relationships, channels of communication–i.e. the infrastructure needed for navigating this particular kind of collaborative space. CHAT therefore offers heuristic value in planning collaborations, building up infrastructure to support effective collaboration practices.

Research Limitations

I have presented key themes from my overall project and reviewed how and why this study may benefit practitioners in DH; however, I am aware that there are several limitations to my research that may have impacted findings.

My study limitations included the collection and analysis of data from a single case study site. As I share in Chapter Three, while this case study offers valuable insight into practices potentially associated with developing sustainable, community-based archives, the limited scope also prevents me from making any generalizations about findings. In addition, the data collection process included contacting community participants listed on the archival website. This group may not be fully representative of all community stakeholders since participants who may have decided to end their involvement at some stage of project development may not be listed. This

limitation could have impacted the types of responses that I received from interviewed participants.

Finally, my own position presented limitations. For example, as a doctoral student with limited funding (who was also working toward a graduation deadline), I had a narrow window of time to gather data. Interview scheduling also understandably needed to fit within participant timetables, sometimes creating delays in how quickly I could conduct interviews. In addition, as I analyzed data, I was conscious of my own biases as a researcher exploring answers to my research questions. To reduce subjectivity while coding, I wrote notes to myself as a reflexive strategy: that is, I described initial reactions to the data, my feelings on what I was seeing, and any assumptions that I seemed to be making. I used this as a way to reflect on any potential biases.

Why This Study Matters to DH and Future Research

My studies in Chapters Two and Four serve both digital archive studies and the Digital Humanities (DH) by promoting transparent discussion of collaborative practices situated within these types of projects. Specifically, this dissertation helps to:

- Identify what collaborative practices are being used in community-based digital archive projects to address the challenges associated with developing archives with community participants. A deeper awareness of practices as discussed by past project developers can help practitioners to identify what is working well and could be applied to future work.

- Emphasize more critical consideration within DH pedagogy of how non-community participants (such as students) are included in community-based archival projects. Chapter One noted that DH courses often incorporate undergraduate and graduate

students within the development process of community-based digital archives: e.g. collecting historic materials, interviewing community participants, etc. The process, while valuable in helping students develop archiving skills, can be problematic since students are only able to select bits and pieces of narratives for public consumption. As noted, they decide what is appropriate or more related to the goals of the overall archive, potentially leaving out crucial histories of the community being documented. Students may then have more control than community members in the development of the archive itself. Through ongoing dialogue with community participants (and emphasizing the need for this type of dialogue in the classroom), DH projects can more fully "serve communities as well as they do students" (Goldbard, 2008, p. 56).

- Suggest approaches that could be applied to community-centered DH projects as a whole. For example, facilitating ongoing conversations among all stakeholders is not limited to archival studies, but can be used by DH practitioners in other work that involves community members.

- Provide a working framework for future research. Although this project was limited to a single case study, it offers ideas for questions to ask on a larger scale to community participants involved in partnerships with universities to develop community-based digital archives.

With the final bullet point in mind, I close this dissertation by considering future research for both community-based digital archive projects and similar DH projects. My suggestions for future research include:

- As mentioned, inconsistencies in term use from the integrative literature review suggested the need for studies that help to develop a language and rhetorical framework for labeling collaborative practices and the expected outcomes. This could involve a nationwide survey shared with the digital archive managers of all joint university/community projects.

- Similarly, a more comprehensive study on what collaborative practices may be associated with the sustainability of community-based digital archives could be conducted through surveying community participants on a nationwide scale.

- Further study might also involve analyzing the growth of community-based digital archives by surveying how community participants are talking about projects in the long-term, including what types of growth or new discussions or participation have occurred thanks to the original project.

These are only a few research possibilities that I have outlined; there are certainly more. Whatever direction that research surrounding this topic takes next, using collaborative practices throughout archive development and beyond offers the potential to both sustain and grow community-based digital archives. Based on findings from this study, I close with a final illustration:

Designing a Community-Based Digital Archive: A Fictitious Example Revisited

In the darkened space of the local library conference room, the bluish glow of a projector beams off the wall. A website page is enlarged on the projector screen. To one side of the page header, the black and white photo of a woman in a gingham dress pushing a plow, one hand

pressed against her forehead. On the other side, letters in large font that read: *Dutton Community Archive: See and Hear Remnants of an Agricultural Past*. The website page begins to scroll down.

A hand raises, a dim outline in the shadowed room. “Wait, pause there for just a moment,” one community participant says.

The graduate student moving the mouse stops mid-scroll.

The participant gestures toward the screen, toward the left-hand corner. “There. That’s a photo that Bernard’s family said they didn’t like being on there.”

The black and white image features a woman staring dully at the camera, her dress sleeve tattered, her shoulders slightly hunched.

“Did he give a reason, Paul?” a voice pipes up.

“That’s apparently his grandmother. See the caption? She was always a cheerful woman, but Bernard said the photographer caught her at a bad moment back then. Something about it being right after a cold front destroyed their crop. His family said they don’t want that up for the public to see. Doesn’t look like her, they say.”

Participants in the room linger over discussing the photo for a moment, make notes, move on to another page of the site, then another. This leads to fifteen more minutes of review, of conversation surrounding the current site.

A light flicks on, and those inside the room blink. There’s a brief silence.

“Well, while we’re all reviewing our notes, thank you all again for going back over what you like and don’t like about the current site,” a woman says. “We are, of course, indebted today to our friends from the university for working to revamp the site under the new grant period to share our Dutton history.” The woman nods toward the graduate student standing at the

computer (he waves), and then toward the university developer at the corner of the table (who also waves).

"Does anyone have suggestions for additions to the archive database?"

A pause, the clearing of a throat.

"We need to think about all the recent articles that just came out about farming communities like Dutton and the relationship to sharecropping histories—I think one was featured in *The New York Times*. I know it was one of the major newspapers. Don't you think we should add a space where we can share current articles that discuss part of the history we're documenting? Keep the conversation alive for the folks visiting the archive."

Several voices begin to speak at once. Another pause.

"It was the *Washington Post*," someone says, "but I agree."

"I think I'd have to disagree, Carla." A man looks up from his pad of paper, shakes his head. "That's a national story–uh, a bit of a negative one. Our focus should be sharing the history of this specific community. If we're adding every article that pops up on the internet to the archive, are we really meeting that goal?"

"That was the original goal, sure, but I don't think we should limit ourselves, right? We have the records digitized now. Couldn't we extend beyond just talking about Dutton?"

The projector flickers blue for a moment, and the graduate student shifts to turn it off. At the corner of the table, the university developer scribbles notes on a sheet of paper.

The participant continues: "I'm not suggesting a significant change. Just an addition somewhere on the site with recent news stories related to the work we're doing."

"True, but–"

The conversation continues.

REFERENCES

About the Project (n.d.). Genoa Indian School Digital Reconciliation Project, https://cdrhdev3.unl.edu/genoa/about-project

Allard, D., & Ferris, S. (2015). Antiviolence and marginalized communities: Knowledge creation, community mobilization, and social justice through a participatory archiving approach. *Library Trends*, 64(2), 260-383.

Ballantine, J.H. & Roberts, K.A. (2009). *Our social world: introduction to sociology.* Los Angeles, CA: Pine Forge Press.

Baxter, P. and Jack, S. (2008) Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report, 13*, pp. 544-559.

Bowie, J. L. (2009). Beyond the universal: The universe of users approach to user-centered design. In S. K. Miller-Cochran & R. L. Rodrigo (Eds.), *Rhetorically rethinking usability* (pp. 135-163). Cresskill, NJ: Hampton Press.

Brewer, J. & Dourish, P. (2008). Storied spaces: Cultural accounts of mobility, technology, and environmental knowing. *International Journal of Human-Computer Studies* 66 (12), pp. 963-976

Brown, K.L. (2016). On the Participatory Archive: The Formation of the Eastern Kentucky African American Migration Project. *Southern Cultures 22*(1), 113-127. doi:10.1353/scu.2016.0002.

Burdick, A., Drucker, J., Lunenfeld, P., Pressner, T., & Schnapp, J. (2012). *Digital Humanities*. Cambridge, MA: Massachusetts Institute of Technology. Retrieved from https://mitpress.mit.edu/books/digitalhumanities

Centre for Inclusive Design (2019). *The benefit of designing for everyone*. Australia. Sydney, NSW: PwC Australia.

Cobos, C., Raquel Ríos, G., Sackey, D., Sano-Franchini, J. & Haas, A.M. (2018). Interfacing cultural rhetorics: A history and a call. *Rhetoric Review* 37 (2), pp. 139-154.

Cohen, D. (n.d.). *What is Digital Humanities? | Digital Humanities Lab*. Pacific Lutheran University. Retrieved April 1, 2021, from https://www.plu.edu/dhlab/what-is-digital-humanities/

Cox, J. (2017). The abbey theatre digital archive: A digitization project with dramatic impact. *Insights, 30*(3), pp. 20-30. Retrieved from

https://proxying.lib.ncsu.edu/index.php/login?url=https://www-proquest-com.prox.lib.ncsu.edu/docview/1967314726?accountid=12725

Creswell, J. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Cunningham, A. (2008). Digital Curation/Digital Archiving: A View from the National Archives of Australia. *The American Archivist*, *71*(2), 530–543. https://doi.org/10.17723/aarc.71.2.p0h0t68547385507

De Lange, N., Mnisi, T., Mitchell, C., & Park, E. G. (2010). Giving Life to Data: University—Community Partnerships in Addressing HIV and AIDS through Building Digital Archives. *E-Learning and Digital Media*, *7*(2), 160–171. https://doi.org/10.2304/elea.2010.7.2.160

Detlor, B., Hupfer, M. E., & Smith, D. H. (2018). Digital Storytelling: An Opportunity for Libraries to Engage and Lead the Community. *Canadian Journal of Information and Library Science 42*(1).

Engeström, Y. (1999) Innovative learning in work teams: analysing cycles of knowledge creation in practice, in: Y. ENGESTRÖM et al (Eds.) *Perspectives on Activity Theory*, (Cambridge, Cambridge University Press), 377-406.

Eschenfelder, K. R., Shankar, K., Williams, R., Lanham, A., Salo, D., & Zhang, M. (2016). What are we talking about when we talk about sustainability of digital archives, repositories and libraries? *Proceedings of the Association for Information Science and Technology*, *53*(1), 1–6. https://doi.org/10.1002/pra2.2016.14505301148

Foot, Kirsten A. (2014). Cultural-Historical Activity Theory: Exploring a Theory to Inform Practice and Research. *Journal of Human Behavior in the Social Environment* (1091-1359), 24 (3).

Gabrenya, W. K. (2003). Culture and Social Class. Retrieved from http://my.fit.edu/~gabrenya/social/readings/ses.pdf.

Gibbs, F. & Owens, T. (2012). Building Better Digital Humanities Tools: Toward Broader Audiences and User-Centered Designs. In *Digital Humanities Quarterly* 006, 2. http://www.digitalhumanities.org/dhq/vol/6/2/000136/000136.html.

Goldbard, A. (2008). *Culture and community development in higher education: The curriculum project report.* Available at http://curriculumproject.net/.

Gormley, G. J., Kajamaa, A., Conn, R. L., & O'Hare, S. (2020). *Making the invisible visible*: a place for utilizing activity theory within in situ simulation to drive healthcare organizational development?. *Advances in simulation (London, England)*, *5*, 29. https://doi.org/10.1186/s41077-020-00148-8

Griffin, G. & Hayler, M. (2018). Collaboration in Digital Humanities Research – Persisting Silences. *Digital Humanities Quarterly 12*(1).

Grimalt-Álvaro, C., & Ametller, J. (2021). A Cultural-Historical Activity Theory Approach for the Design of a Qualitative Methodology in Science Educational Research. *International Journal of Qualitative Methods.* https://doi.org/10.1177/16094069211060664

Halverson, C. A. (2002). Activity theory and distributed cognition: Or what does CSCW need to DO with theories? *Computer Supported Cooperative Work*, 11, pp. 243–275.

Harman, R., Abrahams, T., Kulak, A., Cline, D., Serra, A., Boggs, E., Larkin, S., Rogers, J., Stant, A., Warnick, Q., & Powell, K. (2017). (Co)Constructing Public Memories: Interdisciplinary Approaches to Creating Born-Digital Oral History Archives. *Collections*, *13*(2), 123–132. https://doi.org/10.1177/155019061701300207

Henry, A. (2018). Power, Politics, Possibilities Thoughts Toward Creating a Black Digital Oral History Archive. *Language and Literacy*, *20*(3), 89–99. https://doi.org/10.20360/langandlit29411

Hinton, A. (2014). *Understanding Context: Environment, Language and Information Architecture* (1st edition). Sebastopol, CA: O'Reilly Media.

Hockey, S. (2012). Digital humanities in the age of the internet: reaching out to other communities. *Collaborative Research in the Digital Humanities*, edited by Willard Mccarty, and Marilyn Deegan, Routledge.

Hubbard, M. & Ryan, D. (2018). Chapter 10: Digital Humanities as Community Engagement: The Digital Watts Project. *Digital Humanities, Libraries, and Partnerships*.

Jay, G. (2012). The Engaged Humanities: Principles and Practices for Public Scholarship and Teaching. *Journal of Community Engagement and Scholarship*.

Johnson, B. (2012). Gospel Archiving in Los Angeles: A Case of Proactive Archiving and Empowering Collaborations. *Ethnomusicology Forum, 21*(2), 221-242. Retrieved August 21, 2020, from http://www.jstor.org/stable/23271874

Kaptelinin, V., Nardi, B. & Foot, K. (2006). *Acting with technology: Activity theory and interaction design*. (Chapter 3--starting on page 68). Retrieved from https://ebookcentral.proquest.com.

Kaptelinin, V., Nardi, B. & Macaulay, C. (1999). The Activity Checklist: A Tool for Representing the 'Space' of Context. *Interactions*.

Kirschenbaum, M. (2010). What is Digital Humanities and What's It Doing in English

Departments? *ADE Bulletin* 150: 1-7.

Karuk Tribe, Hillman, L., Hillman, L., Harling, A. R. S., Talley, B., & McLaughlin, A. (2017). Building Sípnuuk: A Digital Library, Archives, and Museum for Indigenous Peoples. *Collection Management*, *42*(3–4), 294–316. https://doi.org/10.1080/01462679.2017.1331870

Lazem, S., Giglitto, D. & Preston, A. (2014). A tent, a pigeon house, and a pomegranate tree. Getting emotional over UX design. *ACM Interactions*. Retrieved from http://interactions.acm.org/blog/view/getting-emotional-overux-design.

Mara, A., & Mara, M. (2015). Capturing social value in UX projects. *Proceedings of the 33rd Annual International Conference on the Design of Communication*, July 16-17, 2015, Limerick, Ireland.

McGrath, J. (2019). Stories of the City: Newark, Newest Americans, and Hyperlocal Forms of Digital Public Humanities. *American Quarterly 71*(1), 301-307. doi:10.1353/aq.2019.0021.

Needham, S., & Quintiliani, K. (2016). Rethinking local history through collaboration: The creation of the cambodian community history and archive project. *Collaborative Anthropologies, 8*(1), 1-20.

Netshakhuma, N. S. (2019). Analysis of South African universities and communities archives. *Global Knowledge, Memory and Communication*, *68*(8/9), 635–651. https://doi.org/10.1108/gkmc-02-2019-0015

Nowviskie, B. (2012). Evaluating Collaborative Digital Scholarship (or, Where Credit is Due). *Journal of Digital Humanities* 1/4 (Winter), at http://journalofdigitalhumanities.org/1-4/evaluating-collaborative-digital-scholarship-by-bethany-nowviskie/.

Pendergrass, K. L., Sampson, W., Walsh, T., & Alagna, L. (2019). Toward Environmentally Sustainable Digital Preservation. *The American Archivist*, *82*(1), 165–206. https://doi.org/10.17723/0360-9081-82.1.165

Potts, L. (2015). Archive experiences: A vision for user-centered design in the digital humanities. In Ridolfo, J. & Hart-Davidson, W. (Eds.), *Rhetoric and the Digital Humanities*. Chicago, IL: University of Chicago Press. pp. 255-263.

Project Sustainability in DH: Collaboration and Community. (n.d.). Digital Humanities at Berkeley. Retrieved February 9, 2021, from https://digitalhumanities.berkeley.edu/blog/15/05/01/project-sustainability-dh-collaboration-and-community

Ridolfo, J. (2015). *Digital Samaritans: Rhetorical Delivery and Engagement in the*

Digital Humanities (Sweetland Digital Rhetoric Collaborative). Ann Arbor, MI: University of Michigan Press.

Ridolfo, J., Hart-Davidson, W., & McLeod, M. (2011). Rhetoric and the digital humanities: imagining the Michigan State University Israelite Samaritan Collection as the foundation for a thriving social network. *The Journal of Community Informatics, 7* (3). Retrieved from http://www.ci-journal.net/index.php/ciej/article/view/754

Riley, A. (2014). Towards a cultural rhetorics methodology: Making research matter with multi-generational women from the Little Traverse Bay Band. *Rhetoric, Professional Communication, and Globalization 5*(1). pp. 108-125.

Rubin, H.J. and Rubin, I.S. (2012). *Qualitative Interviewing: The Art of Hearing Data.* 3rd Edition, Sage Publications, Thousand Oaks.

Sabharwal, A. (2015). Chapter two: Archives and special collections in the digital humanities. *Digital Curation in the Digital Humanities: Preserving and Promoting Archival and Special Collections* (1st ed.). Chandos Publishing.

Salvo, M. J. (2004). Rhetorical action in professional space: Information architecture as critical practice. *Journal Bus. and Tech. Communication 18*(1), 39-66.

Smart, E. & Young, K. (2013). Fruits of Their Labors Digital Collection: A Case Study. *Journal of Western Archives: Vol. 4*: Iss. 1, Article 3. Available digitalcommons.usu.edu/westernarchives/vol4/iss1/3.

Somerville, M.M., & EchoHawk, D. (2011). *Recuerdos Hablados*/Memories Spoken: Toward the Co-Creation of Digital Knowledge with Community Significance. *Library Trends 59*(4), 650-662. doi:10.1353/lib.2011.0018.

Taylor, N. & Cheverst, K. (2012). Supporting community awareness with situated displays. *IEEE Computer 45*(5), pp. 26–32.

Thompson, B. J., & Baugnon, R. A. (2017). A collaborative digital oral history collection: Building a digital collection of student scholarship documenting Latino Americans in southeast North Carolina. *Alexandria, 27*(1), 30–40.

Torraco, R. J. (2005). Writing Integrative Literature Reviews: Guidelines and Examples. *Human Resource Development Review*, *4*(3), 356–367.

Trust, T. (2016). Using Cultural Historical Activity Theory to Examine How Teachers Seek and Share Knowledge in a Peer-to-Peer Professional Development Network. *Australasian Journal of Educational Technology, 33*, 98-113.

Underberg-Goode, N. (2020), Participatory Research and Design in the Portal to Peru. *Annals of Anthropological Practice, 44,* 119-125. doi:10.1111/napa.1213

Walls, D. M., Dieterle, B., & Miller, J. (2018). Designing for social change: User-centered design and difference Feminism. In K. L. Blair & L. Nickoson (Eds.), *Composing Feminist Interventions*. Fort Collins, CO: WAC Clearinghouse. https://wac.colostate.edu/docs/books/feminist/chapter20.pdf

Warwick, C. (2012). Chapter 1: Studying users in digital humanities. In C. Warwick et al. (Eds.), *Digital Humanities in Practice*. London, UK: Facet Publishing.

Welland, S. and Cossham, A. (2019), "Defining the undefinable: an analysis of definitions of community archives," *Global Knowledge, Memory and Communication*, Vol. 68 No. 8/9, pp. 617-634. https://doi-org.prox.lib.ncsu.edu/10.1108/GKMC-04-2019-0049

Wilson Special Collections Library. (n.d.). Creating and growing community-based memory projects. [PDF file]. Retrieved from https://library.unc.edu/wp-content/uploads/2020/06/Memory_Projects.pdf

Yelmi, P., Kuşcu, H. & Yantaç, A. E. (2016). Towards a Sustainable Crowdsourced Sound Heritage Archive by Public Participation: The Soundsslike Project. http://www.soundsslike.com/

Yeh, G.I. (2016). Filipino Love Stories Digital Archiving Project. *American Quarterly 68*(2), 393-396. doi:10.1353/aq.2016.0039.

Yin, R.K. (2014). *Case Study Research Design and Methods* (5th ed.). Thousand Oaks, CA: Sage.

APPENDICES

Appendix A: Participant Solicitation Emails

Archive Stakeholder Solicitation Email – O'Quinn IRB #20850

Hello [insert name],

My name is Erin O'Quinn and I am a doctoral candidate in Communication, Rhetoric, and Digital Media at North Carolina State University. I am writing to let you know about an opportunity to participate in a voluntary research study about designing university/community archiving projects.

Participation includes one interview (30 minutes to 1 hour in length) asking community stakeholders in an archival project to reflect on their experiences during the design process. In order to be a participant in this study, stakeholders must agree to be in the study. They cannot participate in this study if they do not want to be in the study or if they were not involved in archival creation/development in any capacity. The interview is uncompensated, but participants will hopefully gain a better understanding of what works well in archival design processes through reflection and articulation of the process.

Given your participation as a community stakeholder in the [insert archival project], I was wondering if you would consider participating in my case study? I am including the full description of my IRB-Approved Study (eIRB Protocol 20850) as well as the Informed Consent Form for your reference.

Please let me know of any questions you might have. Thank you for your time and consideration!

Best,
Erin O'Quinn
eloquinn@ncsu.edu

Archive Developer Solicitation Email – O'Quinn IRB #20850

Hello [insert name],

My name is Erin O'Quinn and I am a doctoral candidate in Communication, Rhetoric, and Digital Media at North Carolina State University. My dissertation, "Community of Engagement and the User-Centered Archive," focuses on what collaborative practices may be associated with designing sustainable university/community archiving projects.

I'm in the process of researching potential digital archives to use for the case study portion of my dissertation; the goal is to interview an archive developer for context about the project and then several community stakeholders about their experiences during the design process. Interviews are uncompensated, but participants will hopefully gain a better understanding of what works well in archival design processes through reflection and articulation of the process.

Given your work on [insert archival project], I was wondering if you would consider participating in one interview (interview length: 30 minutes to 1 hour) for my case study? I am including the full description of my IRB-Approved Study (eIRB Protocol 20850) as well as the Informed Consent Form for your reference.

Please let me know of any questions you might have. Thank you for your time!

Best,
Erin O'Quinn
eloquinn@ncsu.edu

Appendix B: Informed Consent Forms

Archive Stakeholder Consent Form

Title of Study: A Practice in Collaboration: Communities, Universities, and the Community-Based Digital Archive **(eIRB #20850)**
Principal Investigator(s): Erin O'Quinn, eloquinn@ncsu.edu, (229) 450-4709
Funding Source: None
Faculty Point of Contact: Jean Goodwin, jegoodwi@ncsu.edu, 919-515-8423

What are some general things you should know about research studies?
You are invited to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate, and to stop participating at any time without penalty. The purpose of this research study is to gain a better understanding of designing sustainable university/community archiving projects. We will do this through interviewing project managers and community stakeholders of one select digital archive created in collaboration by a university/community.

You are not guaranteed any personal benefits from being in this study. Research studies also may pose risks to those who participate. You may want to participate in this research because you will help others gain a deeper understanding of what works well (and what does not work so well) in a collaborative archive design process through discussion and reflection. You may not want to participate in this research because this study will have no direct benefit to you.

Specific details about the research in which you are invited to participate are contained below. If you do not understand something in this form, please ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If, at any time, you have questions about your participation in this research, do not hesitate to contact the researcher(s) named above or the NC State IRB office. The IRB office's contact information is listed in the *What if you have questions about your rights as a research participant?* section of this form.

What is the purpose of this study?
The purpose of this study is to explore the types of practices being used to design community-based digital archive projects.

Am I eligible to be a participant in this study?
There will be approximately 6-12 participants in this study.

In order to be a participant in this study, you must agree to be in the study and have been involved in a university/community archive development/design as a stakeholder in some capacity. You cannot participate in this study if you do not want to be in the study or have not been involved in a university/community archive development/design as a stakeholder in some capacity.

What will happen if you take part in the study?
If you agree to participate in this study, you will be asked to do all of the following:

1. Participate in a semi-structured interview about your experience as a stakeholder involved in the development/design of a university/community-created archive. The interview will be audio-recorded.

The total amount of time that you will be participating in this study is 30-60 minutes.

Recording and images
If you want to participate in this research, you must agree to be audio recorded. If you do not agree to be audio recorded, you cannot participate in this research.

Please initial next to the sentence(s) that you agree to.

_____I consent to being audio recorded.
_____I do not consent to being audio recorded.

Risks and benefits
There are minimal risks associated with participation in this research. The risks to you as a result of this research include that a participant may potentially be re-identified in specific responses by triangulating data using indirect identifiers. However, there is an equal chance that participants may or may not be re-identified using their specific responses. I will apply pseudonyms with no identifying markers for all collected data. In addition, direct quotes will be assigned pseudonyms as well with generic markers (e.g. archive stakeholder, project manager). I will also keep any auditory identifying information, such as audio files, saved to my personal (password protected) computer to which only I have access.

Direct benefits: participants (both project manager[s] and archive stakeholders) will gain a better understanding of what works well (and what does not work so well) in the collaborative design processes through reflection and articulation of the process.

Indirect benefits: such a project will help to identify collaborative methods being used to design community-based digital archive projects that are currently invisible or less transparent. My project will also provide a sense of which methods may be associated with greater project sustainability. Both could help DH practitioners when developing future archival projects.

Right to withdraw your participation
You can stop participating in this study at any time for any reason. In order to stop your participation, please contact the principal investigator by email or phone. If you choose to stop participating during the audio-recorded interview, you may contact the investigator, in person, directly; and I will stop recording. If you choose to withdraw your consent and to stop participating in this research, you can expect that the researcher(s) will redact your de-identified information from their data set, securely destroy your data, and prevent future uses of your de-identified information for research purposes wherever possible.

Confidentiality, personal privacy, and data management

Trust is the foundation of the participant/researcher relationship. Much of that principle of trust is tied to keeping your information private and in the manner that we have described to you in this form. The information that you share with me will be held in confidence to the fullest extent allowed by law.

Protecting your privacy as related to this research is of utmost importance to me. However, there are very rare circumstances related to confidentiality where I may have to share information about you. These are limited to instances in which imminent harm could come to you or others.

How we manage, protect, and share your data are the principal ways that I will protect your personal privacy. Data generated about you in this study will be de-identified. Data that will be shared with others about you will be de-identified.

Re-identifiable. Although I will de-identify your information, there is the possibility that this will be re-identifiable. Re-identifiable data is information that I can identify you indirectly because of my access to information, role, skills, combination of information, and/or use of technology. This may also mean that in published reports others could identify you from what is reported, for example, if a story you tell me is very specific. If your data is re-identifiable, I will report it in such a way that you are not directly identified in reports. Based on how we need to share the data, I cannot remove details from the report that would protect your identity from ever being figured out. This means that others may be able to re-identify from the information reported from this research. If the data is reidentified, however, the magnitude of harm is minimal to the participant.

Compensation

There is no compensation for participating.

What if you have questions about this study?

If you have questions at any time about the study itself or the procedures implemented in this study, you may contact the researcher:

Erin O'Quinn
802 King Arthur Drive
Statesboro, GA 30458
eloquinn@ncsu.edu
(229) 450-4709

Jean Goodwin (faculty advisor)
Winston Hall 229 (NC State University)
jegoodwi@ncsu.edu
919-515-8423

What if you have questions about your rights as a research participant?

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact the NC State IRB (Institutional Review Board) Office. An IRB office helps participants if they have

any issues regarding research activities. You can contact the NC State IRB Office via email at irb-director@ncsu.edu or via phone at (919) 515-8754.

Consent To Participate

By electronically signing this consent form, I am affirming that I have read and understand the above information. All of the questions that I had about this research have been answered. I have chosen to participate in this study with the understanding that I may stop participating at any time without penalty or loss of benefits to which I am otherwise entitled. I am aware that I may revoke my consent at any time.

Participant's printed name _____

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

Archive Manager/Developer Consent Form

Title of Study: A Practice in Collaboration: Communities, Universities, and the Community-Based Digital Archive **(eIRB #20850)**
Principal Investigator(s): Erin O'Quinn, eloquinn@ncsu.edu, (229) 450-4709
Funding Source: None
Faculty Point of Contact: Jean Goodwin, jegoodwi@ncsu.edu, (919) 515-8423

What are some general things you should know about research studies?

You are invited to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate, and to stop participating at any time without penalty. The purpose of this research study is to gain a better understanding of designing sustainable university/community archiving projects. We will do this through interviewing project managers/developers and community stakeholders of a digital archive created in collaboration by a university/community.

You are not guaranteed any personal benefits from being in this study. Research studies also may pose risks to those who participate. You may want to participate in this research because you will help others gain a deeper understanding of what works well (and what does not work so well) in a collaborative archive design process through discussion and reflection. You may not want to participate in this research because this study will have no direct benefit to you.

Specific details about the research in which you are invited to participate are contained below. If you do not understand something in this form, please ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If, at any time, you have questions about your participation in this research, do not hesitate to contact the researcher(s)

named above or the NC State IRB office. The IRB office's contact information is listed in the *What if you have questions about your rights as a research participant?* section of this form.

What is the purpose of this study?
The purpose of this study is to explore the types of practices being used to design community-based digital archive projects.

Am I eligible to be a participant in this study?
There will be approximately 6-12 participants in this study.

In order to be a participant in this study, you must agree to be in the study and have been involved in a university/community archive development/design as a project manager or developer. You cannot participate in this study if you do not want to be in the study or have not been involved in a university/community archive development/design as a project manager or developer in some capacity.

What will happen if you take part in the study?
If you agree to participate in this study, you will be asked to do all of the following:

1. Participate in a semi-structured interview about the process of designing a university/community-created archive as the project manager or developer. The interview will be audio-recorded.
2. Potentially receive a follow-up email to clarify responses.

The total amount of time that you will be participating in this study is 30-60 minutes.

Recording and images

If you want to participate in this research, you must agree to be audio recorded (to solely be used for interviewer's reference). If you do not agree to be audio recorded, you cannot participate in this research.

Please initial next to the sentence(s) that you agree to.

_____I consent to being audio recorded.
_____I do not consent to being audio recorded.

Risks and benefits

There are minimal risks associated with participation in this research. The risks to you as a result of this research include that your name/archive name will be included in the study. However, your responses are meant to offer context for the project and pose minimal risk.

Direct benefits: participants (both project manager[s], developers, and archive stakeholders) will gain a better understanding of what works well (and what does not work so well) in the collaborative design processes through reflection and articulation of the process.

Indirect benefits: such a project will help to identify collaborative methods being used to design community-based digital archive projects that are currently invisible or less transparent. My project will also provide a sense of which methods may be associated with greater project sustainability. Both could help DH practitioners when developing future archival projects.

Right to withdraw your participation

You can stop participating in this study at any time for any reason. In order to stop your participation, please contact the principal investigator by email or phone. If you choose to stop participating during the audio-recorded interview, you may contact the investigator, in person, directly; and I will stop recording. If you choose to withdraw your consent and to stop participating in this research, you can expect that the researcher(s) will redact your information, securely destroy, and prevent future uses of your information for research purposes wherever possible.

Confidentiality, personal privacy, and data management

Trust is the foundation of the participant/researcher relationship. Much of that principle of trust is tied to keeping your information private and in the manner that we have described to you in this form. The information that you share with me will be held in confidence to the fullest extent allowed by law.

Protecting your privacy as related to this research is of utmost importance to me. However, there are very rare circumstances related to confidentiality where I may have to share information about you. These are limited to instances in which imminent harm could come to you or others.

Compensation

There is no compensation for participating.

What if you have questions about this study?

If you have questions at any time about the study itself or the procedures implemented in this study, you may contact the researcher:

Erin O'Quinn
802 King Arthur Drive
Statesboro, GA 30458
eloquinn@ncsu.edu
(229) 450-4709

Jean Goodwin (faculty advisor)
Winston Hall 229 (NC State University)
jegoodwi@ncsu.edu
(919) 515-8423

What if you have questions about your rights as a research participant?
If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact the NC State IRB (Institutional Review Board) Office. An IRB office helps participants if they have any issues regarding research activities. You can contact the NC State IRB Office via email at irb-director@ncsu.edu or via phone at (919) 515-8754.

Consent To Participate

By electronically signing this consent form, I am affirming that I have read and understand the above information. All of the questions that I had about this research have been answered. I have chosen to participate in this study with the understanding that I may stop participating at any time without penalty or loss of benefits to which I am otherwise entitled. I am aware that I may revoke my consent at any time.

Participant's printed name _____

Participant's signature _____ **Date** _____

Investigator's signature _____ **Date** _____

Appendix C: Interview Protocol

Community Stakeholder Interview Protocol

1. Tell me about your experience working on this archival project.
2. In what ways were you involved when the archive was being designed?
3. What do you specifically remember or value about being part of the archive design?
4. Please describe any ways that you interact with/are involved with the archive now.
5. Any additional thoughts you would like to share?

Archive Project Manager/Developer Interview Protocol

1. Could you describe the background of this project? What was (or is) your role in its development?
2. Who was involved in the design and development of the archive? What did this process look like?
3. Could you tell me more specifically about how community stakeholders were involved in the design process for this archive? What were the practices that were used?
4. How would you describe both general and community stakeholder use of the archive today?
5. What, to you, makes a sustainable archive?
6. Any additional thoughts you would like to share?