University of New Mexico

## UNM Digital Repository

University Libraries & Learning Sciences Faculty and Staff Publications

Academic Department Resources

2023

# Digital Archive Kits: Accessibility and Flexibility

Glenn Koelling
*University of New Mexico*, gkoelling@unm.edu

Follow this and additional works at: https://digitalrepository.unm.edu/ulls_fsp

Part of the Scholarly Communication Commons

## Recommended Citation

# Digital Archive Kits
## Accessibility and Flexibility

*Glenn Koelling*

It's easy to get students excited about physical archival items. All a librarian has to do is place items on the table and the materiality and rarity make them irresistible to students. As the English liaison of the University Libraries at the University of New Mexico (UNM), I encourage instructors working with early undergraduates to come into the archives so students can get hands-on work with primary sources. But that's not always possible for a variety of reasons, and moreover, archival one-shots are often limited by time.

Digital archives, conversely, can simultaneously over- and underwhelm students; the computer's flattening effect of the items, the emphasis on content over form, and unfamiliar or unwieldy interfaces are barriers to creating genuine learning opportunities using digital archival material.[1] Yet digital archives have undeniable benefits—the most prominent being ease of access.

In 2018, a colleague and I began a project that introduced early undergraduate literature students to work in the archives. Students learned how to handle fragile books while closely examining them in preparation for an essay where they compared two editions of the same novel and hypothesized about the significance of the differences. From that collaboration, we theorized that physical archives create an embodied learning experience that lends itself well to certain information literacy concepts so instructors should not treat digital and physical archives as pedagogically identical.[2] Thanks to this collaboration, I was inspired to try to provide a better pedagogical experience with digital archives. As Lindquist and Long concluded from their study about educational digital archives platforms, above all the technology "should be easy for students and faculty to use and save their time."[3] But more than that, digital archives used for teaching should be accessible for all users, regardless of physical ability. In this chapter, I use the Web Accessibility Initiative's definition of accessibility ("Web accessibility means that people with disabilities can equally

perceive, understand, navigate, and interact with websites and tools") as well as its definition of inclusivity ("Inclusion: is about diversity, and ensuring involvement of *everyone* [emphasis mine] to the greatest extent possible.")[4] How could I create an inclusive digital archives experience designed for our population in an accessible, online environment using my limited technical know-how and resources?

# Archive Kit as Pedagogical Resource

As an answer, I created the Archive Kit (https://digitalrepository.unm.edu/oer_letters/) using our Bepress institutional repository in spring 2020. In brief, the Archive Kit is a collection of thirteen digitized letter files from our special collections, a worksheet, and a lesson plan—all hosted in our repository as PDFs. The Archive Kit is designed to be accessible, flexible, and easy to set up. UNM is Carnegie classified as having Very High Research Activity. There is a heavy research emphasis at all levels, but it skews toward STEM fields at the undergrad level. The Archive Kit was initially intended to support English instructors who may not be able to come into the archives but who wanted their students to have experience working with primary sources. Our library instruction program provides a lot of support for English instructors at the 1000 level, and the Archive Kit was a nice opportunity to provide a digital learning object for instructors at the 2000 level. It was quickly apparent, however, that the Archive Kit was not limited to English; the worksheet guides students through a mini original research project rooted in their curiosity about the letters, which would be appropriate for any subject that uses archival research. This chapter is divided into two main parts: (1) an explanation of the purpose and pedagogy of the Archive Kit and (2) the process of creating one.

# Inclusivity

University archives can be unwelcoming or intimidating places—especially to undergraduates and people of color.[5] UNM is a Hispanic-serving institution with a large Native student population, and most of our students come from New Mexico. As a result, UNM has a wonderfully diverse student body with strong ties to the state, and the digital learning objects we create need to represent this diversity. While digital archives remove some of the physical barriers of the archives, who is included and excluded in that content still speaks volumes.[6] The Archive Kit was an opportunity for students to see some of New Mexico's diversity reflected in the letters.

To this end, I included many letters with clear New Mexico connections that covered a wide range of topics from a variety of perspectives, time periods, and languages. Among the voices, there is a New Mexican teacher writing to the constitutional governor of Tabasco about Mexican sex ed, a jailed kidnapper writing (quite distressed) to his parents, a Japanese fan writing to Katherine Otero Stinson (a famous New Mexican pilot), and the governor of Zuni Pueblo advocating for better representation. In terms of topics and times, the letters range from an exchange negotiating marriage in the 1860s to a complaint against a state police officer in 1997 (included in an LGBT collection). There is one Spanish language letter.

Inclusivity is more than representation,[7] so each letter is fully and richly accessible in this digital landscape, meaning that all users can access the content regardless of ability. The World Wide Web Consortium created the Web Content Accessibility Guidelines (WCAG) 2.1, which lay out the standards for online accessibility, including for images like those in the Archive Kit.[8] Since the Archive Kit relies primarily on digitized images of text, I applied several accessibility features to the PDFs: alternative text for images, headings for document structure and navigation, and optical character recognition (OCR) to make text in images readable for a computer. These features are key for users who have poor vision or who rely on assistive software like screen readers and can be added using software like Adobe Acrobat Pro. Those letters that could not be OCRed have a transcript. All letters have a short, physical description of the item at the end, for example: "One page of yellowed paper, written on front and back, creases showing it had been folded in quarters. Discolored, grey upper corner and sides of back. Messy handwriting, written in pencil, uneven lines." Accessibility is a place where digital archives can even the playing field if done properly; all students can have access both to the intellectual content and to descriptions of the physical content.

# Archive Kit's Purpose and Pedagogy

The lesson plan and worksheet are situated in the Association of College and Research Libraries' frame "Research as Inquiry"[9] and guide instructors and students through a miniature original research project using the letters. This exercise offers a soft introduction to working with primary sources. The main point of the lesson plan is to help students develop their ability to ask questions about something unfamiliar that they then try to answer—a skill that will be useful in academia and beyond—rather than becoming proficient at interpreting primary sources. However, the Archive Kit lays the groundwork to support more advanced primary source instruction because students ask questions, summarize content, and learn about the letter's context.[10]

The lesson plan (see appendix A) walks instructors through the exercise, giving learning objectives, explaining the preparation work necessary for the instructor, and providing guidance about grading. There are three learning objectives: (1) students will examine primary materials (letters) in order to draft research questions about them, (2) students will use their research questions in order to focus their secondary research efforts, and (3) students will synthesize their observations and findings in order to present an explanation of their letter. The lesson plan also identifies modifications and areas students may get stuck (primarily doing secondary research) and suggests solutions. The lesson plan is clear that "this exercise focuses on asking questions about primary materials and answering them using research, not source evaluation or citations." It is perhaps tempting to use this exercise as a way to practice citations, but to reduce cognitive load and to focus more narrowly on the research process, I suggest that instructors use this as a way to scaffold learning, focusing on citations in a separate assignment.

Inspired by the Right Question Institute's Question Formulation Technique's emphasis on asking questions,[11] the worksheet (see appendix B) guides students through their mini original research project. It demonstrates to students, in a short, manageable way, what original research looks like at the most basic level of asking and trying to answer questions. It is comprised of six parts and designed to take about one and a half hours. Part 1 asks students to browse letters and choose one. In part 2, students set a timer for five minutes to get to know their letter; they are prompted to think about both the content and the appearance. For part 3, students brainstorm twelve questions with the emphasis on quantity rather than getting hung up on quality. The goal is to get students to practice asking questions—to stretch their curiosity and creativity. There are no right or wrong questions, and the student can go in whichever direction makes sense to them. Then in part 4, students choose their top three questions with an explanation as to why they chose each question. This part is designed for students to identify and explain what makes a question interesting. Part 5 asks students to try to answer those three questions. Students have a lot of freedom in answering their questions—the worksheet acknowledges that they may not be able to answer their specific questions so they may need to get creative in finding a link to investigate. The important thing is that they identify something about their item to research using secondary sources, even if it diverges from their questions. For instance, a student might wonder who the letter writer was and try to find information about them, while another student might wonder what the political climate of New Mexico was in the 1990s. The worksheet also gives guidance about how to start finding information like this, including directing students to look at their letter's finding aid as well as linking to useful library resources like historical newspapers or encyclopedias. Students also list citation information in this part to what they find. Finally, the last part is a summary of their findings. The worksheet ends by tying this practice to other forms of research they're likely to encounter: "You can use this same process for other research projects: (1) get to know your topic by

figuring out what you already know, (2) ask some questions about it, and (3) see if you can answer those questions using research."

# Flexibility

While I have provided a lesson plan and worksheet, the Archive Kit's flexibility means it can be tailored to a variety of different classes, depending on class goals and student needs. The lack of metadata or detailed descriptions of the letters enables different instructors to use it in different ways. For example, while the lesson plan and worksheet offer a taste of original research, a composition class could use the letters for genre or rhetorical analysis. A history class could use them as objects for historical analysis. A class in archives or museum studies could use them to practice metadata. Since it is hosted in our institutional repository, it would be easy to add other lesson plans or worksheets.

In my own instruction, I teach an upper division, three-credit course called Managing Information for Professionals for the Organization, Information, and Learning Sciences department, which is in the same college as UNM Libraries. As part of this class, we talk about how information structures (like databases) work. I used the Archive Kit's letters for an assignment where students drafted a simple database schema. This is an example where having vague metadata was useful as the students created their own fields and decided on their own vocabulary.

# Creating the Archive Kit

The process for creating the Archive Kit was not hard. It required some tools and software that we already had, but none of them were particularly unique. I collaborated with several UNM colleagues on this project who helped make this a success, but this shouldn't dissuade solo librarians or archivists—it might take longer, but an Archive Kit could be done on one's own. UNM's Center for Southwest Research (CSWR) has an abundant archive, but even that isn't necessary. Old documents might hold a certain appeal, but this project would work equally well with modern documents since the emphasis is on asking questions and finding answers.

## *Selecting Items*

While an Archive Kit could be made of any collection of primary materials, I chose letters in part because they rely on the written word, which is easier to make accessible, as opposed to photographs, where a lot of description would be necessary for people with vision impairments. Letters are also a familiar format to students—while

the content may change, letters share commonalities of structure. For example, there is a sender and receiver, there is a location, they are one-sided, and so on.

I identified potential letters from looking at finding aids, and CSWR staff pointed me in the direction of other letters of interest. Variety and intrigue were two of my top considerations when choosing letters, and almost all letters had a New Mexico connection. I especially looked for typed letters that could take optical character recognition in order to reduce the number of them that would need transcripts. All letters needed to have something that could spark students' curiosity—enough to pull them in but not be prohibitively long. Since so many of them offered glimpses into fascinating stories, I often included response letters when available to give more context.

## Digitizing and Hosting

We chose our institutional Bepress repository to host since I could upload and manage content with minimal training, and it is easily accessible by students and instructors. Our repository is managed by our Digital Initiatives and Scholarly Communication (DISC) department, so student employees from the CSWR digitized my selections as high-resolution preservation copies and put them into a shared drive where a DISC colleague converted them to a lower resolution PDF appropriate for the repository. This process took about three weeks, during which I transcribed and described letters. The only metadata included was the title, author, and date of the letter, with a brief description of content and link to the CSWR's finding aid.

The repository also offered the needed functionality to protect materials under copyright. Many of the letters are out of copyright, but not all. We were unable to get permission to publicly share one of the letters. Since it is a relatively recent letter (1997) about policing and civil liberties in New Mexico, I wanted to keep it because the language is more familiar (unlike the conventions of the 1860s letters) and because it relates to current issues of policing. Instead, we restricted access only to the UNM community, and anyone interested in viewing the letters must enter their UNM credentials. Unfortunately, we could not do this on a letter-by-letter basis, so the entire Archive Kit requires authentication. As an additional protection, since these are high quality images, each letter got a CSWR watermark.

## Making the Kit Accessible

Archival work is more than just accessing the intellectual content of the letters; it is also an experience working with the physical properties of the items.[12] While digital archives do not lend themselves to all our senses as physical archives do, we can still

add what sensory descriptions we can not only as a way of being inclusive for folks with visual impairments but also as a way of enriching the digital document for all users. Any associated items like envelopes or family transcriptions were also included in the digitization. I used Adobe Acrobat Pro to recognize the text, correct the OCR, and merge PDFs into one file. Some letters—usually written on a typewriter or handwritten—could not take OCR nicely and needed a transcript to ensure screen reader access. Each letter starts with the image and is followed by a description and transcript if needed in one file.

As someone who doesn't use a screen reader, I wasn't sure how the experience would be for someone who uses one. A colleague at UNM's Accessibility Resource Center agreed to review the files using her screen reader and gave me feedback. This step took several iterations as I learned more about the limits of OCR using Adobe; for example, words that appeared normal to me would actually be squished together or broken apart oddly for the screen reader. It was for this reason I used more transcripts than I originally had anticipated. My colleague also suggested language to help students navigate the collection at the outset: "Please note that in order to read these letters with all accessibility features intact, you will need to save the document to your PC and then open it using Acrobat Reader DC, rather than using a browser extension like the Adobe Acrobat Extension for Google Chrome."

# Assessment

In a stroke of good timing, this project was finished during spring of 2020, right when COVID had moved all courses remote. As instructors scrambled to move online, we were able to offer the Archive Kit as a pedagogical resource—lesson plan already done. Feedback from one instructor who beta tested it was positive. A few of their students agreed to share their worksheets with me, and I was amazed at the range of questions they asked and the lines of inquiry they followed, many of which had never occurred to me. As of November 2022, Archive Kit files have been downloaded over 560 times. One student from a recent class that used the Archive Kit reflected: "One thing that surprised me about archival research is that it wasn't boring." I am delighted by this feedback because it indicates sincere engagement with the research process. While it's hard to know exactly how these letters are being used and by whom, it's heartening to see the steady click of usage. In an ideal world, I would know which classes this is being used in and how students are applying skills they learned in this activity to other contexts. Embedded or co-teaching librarians would have better access to assessments like these. Instructors could use this activity as a scaffold to asking and answering questions in disciplinary-specific activities (applying this process to a topic instead of letters, for instance).

# Conclusion and Future Directions

Archives kits are not hard to put together with a few standard tools and a little time, and I hope other librarians and archivists feel inspired to create their own kits, tailored for their communities. They're a great way to make collections accessible and to get students working with primary materials while providing support for instructors at the same time. As for UNM's Archive Kit, I hope to include other lesson plans and other types of primary resources that would speak to this time and this location and that would spark students' curiosity—all richly described and accessible.

# Appendix A: Archive Kit Online Lesson Plan

This lesson plan uses digitized letters scanned from UNM's Center for Southwest Research and a worksheet to guide students through a mini original research project. In this activity, students will choose a letter to work with. They'll examine it, ask questions about it, and then use those questions to do research about some aspect of their letter.

**Time:** At least 1.5 hours

**Materials:** Archive Kit—Letters: https://digitalrepository.unm.edu/oer_letters/ & Student Analysis Worksheet

## *Objectives*

- Objective 1: Students will examine primary materials (letters) in order to draft research questions about them.
- Objective 2: Students will use their research questions in order to focus secondary research efforts.
- Objective 3: Students will synthesize their observations and findings in order to present an explanation of their letter.

## *Overview*

### PREWORK

Instructor should review letters and worksheet to familiarize themselves with the activity. Ideally, connect this activity with what's being done in class. How does this activity complement the course? For example, explain that this is an exercise in doing original research or that this exercise mirrors the research process students will be doing for a research paper.

Post the link to the Archive Kit in the class with directions, and let them know how many points are associated with the exercise and where they should turn in their worksheet. The worksheet may be assigned all at once or may be broken into different components; parts 1–3 could be due earlier and parts 4–6 due later. The instructor may also want to download the worksheet and post in class (although the worksheet is also available in the Archive Kit). The instructor may also wish to modify the worksheet. For example the analysis in part 6 has no instructions for length or formality

of writing. But remember, this exercise focuses on asking questions about primary materials and answering them using research, not source evaluation or citations.

# Directions (Modify as Needed)

You will be completing a worksheet using digitized letters from UNM's archives. This worksheet has six parts and will walk you through your analysis. Please do the parts in the order they appear on the worksheet. Enter your responses on the worksheet and turn it in to the proper assignment link. Worksheets are due:

## ACTIVE WORK FOR STUDENTS

The worksheet will guide students through the activity. The instructor or a librarian may be needed to help students with secondary research.

## REVIEWING COMPLETED WORKSHEETS

If grading this assignment, there are no right answers. This exercise focuses on asking questions about primary materials and answering them using research (which is an abbreviated version of the research cycle), so the assessment should focus on these aspects. The emphasis of this exercise is not source evaluation or proper citation technique, so those requirements should be very loose.

# Appendix B: Archive Kit—Letters: Student Analysis Worksheet

**Directions:** This worksheet has six parts and will walk you through your analysis. Please do the parts in the order they appear on this worksheet. Enter your responses on this worksheet.

**Part 1:** Browse through the letters in the Archive Kit. There are transcriptions for handwritten ones, but you might want to see what you can read on your own. Choose one that you want to work with.

- Enter the title of your chosen letter here:

**Part 2**: Now that you've chosen your letter, spend some time with it (just your letter please—hold off on googling/researching for now). Set a timer for at least 5 minutes (but take as much time as your need), and get to know your document. Remember, these letters have appearances as well as content. If you're stuck, think about who, what, when, where, why, and how.

- What details seem important about your document? Write them down here:

**Part 3:** Now that you've reviewed your letter, what questions do you have about it or parts of it? What are you curious about? What do you wish you knew? Write down 12 questions (or more) about the letter—these can be big or small questions! Right now, we're going for quantity over quality.

- Q1:
- Q2:
- Q3:
- Q4:
- Q5:
- Q6:
- Q7:
- Q8:
- Q9:
- Q10:
- Q11:
- Q12:

**Part 4:** Look back over your questions and highlight your favorite 3 questions. Below, write a sentence or two for each question about why you chose it.

- Write your reasoning for each question here:

**Part 5:** Now we're going to take these questions and use them as a starting point to get into doing some research on your letter. Can you answer any of your questions? You may be able to answer them. You may not. Either way that's fine. You have a lot

of freedom here—you just have to be able to connect your research to your letter. You may need to get creative. For example, maybe you research names or locations or an aspect of the era—you decide. Here are some resources to get you started (you may use others):

- Look at the link to the item in your letter's description—this will have more information about where the letter came from.
- Wikipedia
- ProQuest Historical Newspapers (need your UNM NetID & password if off-campus)
- Gale Encyclopedias (need your UNM NetID & password if off-campus)
- UNM library or ebooks (Use the main Catalog search box. You can filter by "Source Type" to "ebooks")
- Library databases (Click on "Database" tab, then you can use the drop-downs to look for databases by subject—like History—or by type.)

What did you find?

- Enter an informal citation for your research here. Citation should include author, title, date, & URL (if these are available—if not, just do your best):

**Part 6:** Last but not least! Write up a summary of your letter and what you found with your research about the letter (or some aspect of it). Imagine you are explaining it to someone who is unfamiliar with the letter.

- Enter your analysis here:

**Congratulations! You've just finished a mini original research project! You can use this same process for other research projects: (1) get to know your topic by figuring out what you already know, (2) ask some questions about it, and (3) see if you can answer those questions using research.**

# Notes

1. Peter Lester, "Of Mind and Matter: The Archive as Object," *Archives and Records* 39, no. 1, (2018): 75, https://doi.org/10.1080/23257962.2017.1407748; Thea Lindquist and Holley Long, "How Can Educational Technology Facilitate Student Engagement with Online Primary Sources? A User Needs Assessment," *Library Hi Tech* 29, no. 2 (2011): 227–28, https://doi.org/10.1108/07378831111138152.
2. Amy Gore and Glenn Koelling, "Embodied Learning in a Digital Age: Collaborative Undergraduate Instruction in Material Archives and Special Collections," *Pedagogy* 20, no. 3 (October 2020): 453–72, https://muse.jhu.edu/article/765008.
3. Lindquist and Long, "How Can," 236.
4. W3C Web Accessibility Initiative, "Accessibility, Usability, and Inclusion," last updated May 6, 2016, https://www.w3.org/WAI/fundamentals/accessibility-usability-inclusion/.
5. Meredith E. Torre, "Why Should Not They Benefit from Rare Books? Special Collections and

Shaping the Learning Experience in Higher Education," *Library Review* 57, no. 1 (2008): 37, https://doi.org/10.1108/00242530810845044; Ashley Farmer, "Archiving While Black," *Chronicle of Higher Education*, July 22, 2018, https://www.chronicle.com/article/archiving-while-black/.

6.   S. L. Ziegler, "Digitization Selection Criteria as Anti-racist Action," *Code4Lib Journal* 45 (August 9, 2019), https://journal.code4lib.org/articles/14667.

7.   W3C Web Accessibility Initiative, "Accessibility."

8.   W3C, *Web Content Accessibility Guidelines (WCAG) 2.1*, ed. Andrew Kirkpatrick, Joshue O Connor, Alastair Campbell, and Michael Cooper, June 5, 2018, https://www.w3.org/TR/WCAG21/; W3C, "Perceivable," *Web Content Accessibility Guidelines (WCAG) 2.1*, ed. Andrew Kirkpatrick, Joshue O Connor, Alastair Campbell, and Michael Cooper, June 5, 2018, https://www.w3.org/TR/WCAG21/#perceivable.

9.   Association of College and Research Libraries, *Framework for Information Literacy for Higher Education* (Chicago: Association of College and Research Libraries, 2016), https://www.ala.org/acrl/standards/ilframework.

10.   ACRL RBMS–SAA Joint Task Force on the Development of Guidelines for Primary Source Literacy, *Guidelines for Primary Source Literacy*, Summer 2017, 4–5, https://www2.archivists.org/sites/all/files/Guidelines%20for%20Primary%20Souce%20Literacy%20-%20FinalVersion%20-%20Summer2017_0.pdf.

11.   Right Question Institute, "What Is the QFT?," accessed May 20, 2021, https://rightquestion.org/what-is-the-qft/.

12.   Lester, "Of Mind," 77.

# Bibliography

ACRL RBMS–SAA Joint Task Force on the Development of Guidelines for Primary Source Literacy. *Guidelines for Primary Source Literacy*. Summer 2017. https://www2.archivists.org/sites/all/files/Guidelines%20for%20Primary%20Souce%20Literacy%20-%20FinalVersion%20-%20Summer2017_0.pdf.

Association of College and Research Libraries. *Framework for Information Literacy for Higher Education*. Chicago: Association of College and Research Libraries, 2016. https://www.ala.org/acrl/standards/ilframework.

Farmer, Ashley. "Archiving While Black." *Chronicle of Higher Education*, July 22, 2018. https://www.chronicle.com/article/archiving-while-black/.

Gore, Amy, and Glenn Koelling. "Embodied Learning in a Digital Age: Collaborative Undergraduate Instruction in Material Archives and Special Collections." *Pedagogy* 20, no. 3 (October 2020): 453–72. https://muse.jhu.edu/article/765008.

Lester, Peter. "Of Mind and Matter: The Archive as Object." *Archives and Records* 39, no. 1 (2018): 73–87. https://doi.org/10.1080/23257962.2017.1407748.

Lindquist, Thea, and Holley Long. "How Can Educational Technology Facilitate Student Engagement with Online Primary Sources? A User Needs Assessment." *Library Hi Tech* 29, no. 2 (2011): 224–41. https://doi.org/10.1108/07378831111138152.

Right Question Institute. "What Is the QFT?" Accessed May 20, 2021. https://rightquestion.org/what-is-the-qft/.

Torre, Meredith E. "Why Should Not They Benefit from Rare Books? Special Collections and Shaping the Learning Experience in Higher Education." *Library Review* 57, no. 1 (2008): 36–41. https://doi.org/10.1108/00242530810845044.

W3C. *Web Content Accessibility Guidelines (WCAG) 2.1*, edited by Andrew Kirkpatrick, Joshue O Connor, Alastair Campbell, and Michael Cooper. June 5, 2018. https://www.w3.org/TR/WCAG21/.

———. "Perceivable." *Web Content Accessibility Guidelines (WCAG) 2.1*, edited by Andrew Kirkpatrick, Joshue O Connor, Alastair Campbell, and Michael Cooper. June 5, 2018. https://www.w3.org/TR/WCAG21/#perceivable.

W3C Web Accessibility Initiative. "Accessibility, Usability, and Inclusion." Last updated May 6, 2016. https://www.w3.org/WAI/fundamentals/accessibility-usability-inclusion/.

Ziegler, S. L. "Digitization Selection Criteria as Anti-racist Action." *Code4Lib Journal*, no. 45 (August 9, 2019). https://journal.code4lib.org/articles/14667.