

# Considering Intersections Between Critical Data Literacies and Digitized Distinctive Collections

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## Problem Statement

This research seeks to situate digitized distinctive collections within emerging data literacy programs in academic libraries.

### Research Questions:

- Why have academic libraries been slow to adapt data literacy methodologies to help students navigate digitized collections?
- What is the definition of critical data literacy?
- And, how might emerging CDL models be applied to digitized distinctive collections?

## Research Methods

A literature review was conducted to explore emerging critical data literacy frameworks. A further search was conducted to see how galleries, libraries, archives, and museums (GLAMs) have addressed the problem. In addition, case studies were reviewed to assess digital literacy approaches for digitized distinctive collections.

## Definition-Critical Data Literacy (CDL)

Critical data literacy is defined as the ability to engage with data by reflecting on the social, ethical, and political implications of data creation, stewardship, and use.

- It focuses on ethical research practices specifically how data can be used and misused.
- It asks researchers to consider questions relating to autonomy, privacy, and empathy between stakeholders of digitized collections.
- It also asks students to examine data to understand power relations with a specific sensitivity to intersectional considerations that have negatively affected historically marginalized communities.

## FINDINGS

While traditional data literacy programs have been successful in centering academic libraries as an entry point for an array of data literacy classes and workshops, there is growing literature that indicates that current data literacy programs have tended to have a narrow focus on the statistical analysis of social science datasets. To date, many traditional programs do not include training in the critical analysis of materials that have been digitized from analog collections housed in archives, special collections and museums and made available on discovery platforms including institutional repositories.

With the exponential growth of digitized collections, there is a greater need for students to acquire critical data literacy skills that lie outside of the scope of statistical competencies and tool-based pedagogies. Several scholars within critical data studies have provided literacy frameworks that focus on more holistic and inclusive approaches to data ethics training for students across disciplines. These emerging frameworks have the potential to inform future data literacy methodologies for digitized distinctive collections.

For GLAM practitioners who engage in literacy instruction, research indicates that there is a close correlation between emerging models of CDL and an archival ethics of care-- the transformative framework that outlines how the concept of empathetic stewardship can further the understanding of the complex relationships between digital stewards, the people and communities that are represented in digital collections, and the evolving research communities that use digital collections.

From the perspective of GLAM practitioners, case studies reveal that data literacy competencies should include the ability to recognize and respond to the ways that digitized data may reflect biases inherent in digital stewardship practices and address how these practices influence research as well as echo larger power relations in society. Case studies suggest emerging CDL models can also support innovative instructional approaches specifically in the areas of crowdsourcing for digitization, co-curation initiatives with community archives, and "problem-posing" learning activities.

For academic libraries' literacy programs, research suggest that data literacy models that incorporate digitized distinctive collections can help realign teaching and learning in interdisciplinary situational experiences in which students can engage and connect the impact of data to communities as well as foster students' agency as researchers and knowledge producers.

## Selected References

Javiera Atenas, Leo Havemann, and Christian Timmermann, "Reframing Data Ethics in Research Methods Education: A Pathway to Critical Data Literacy," *International Journal of Educational Technology in Higher Education* 20, no. 1 (2023): 1–27; Michelle Caswell and Marika Cifor, "Neither a Beginning nor an End: Applying an Ethics of Care to Digital Archival Collections," in *The Routledge International Handbook of New Digital Practices in Galleries, Libraries, Archives, Museums, and Heritage Sites*, edited by Hannah Lewi, Wally Smith, Dirk vom Lehn, and Steven Cooke, 159-168 (London, Routledge, 2020); Catherine D'Ignazio, "Creative Data Literacy: Bridging the Gap Between the Data-Haves and Data-Have Nots," *Information Design Journal* 23, no. 1 (2017): 6–18, Simon Knight, Camillia Matuk, and Kayla Desportes, "Learning at the Intersection of Data Literacy and Social Justice," *Educational Technology & Society* 25, no. 4 (2022):70–79; Calzada Javier Prado and Miguel Ángel Marzal, "Incorporating Data Literacy into Information Literacy Programs: Core Competencies and Contents," *Libri (København)* 63, no. 2 (2013): 123–34.