

Implementing the Data Storytelling Toolkit for Librarians

Introduction. Imagine a world where every library tells powerful stories about its community impact. Picture beautifully clear data visualizations alongside interactive tools for benchmarking. Envision librarians who have storytelling tools at their fingertips that are tailored to libraries and based in our own library storytelling traditions. The Data Storytelling Toolkit for Libraries (DSTL) connects two visions: data storytelling teaching from the **University of Illinois iSchool** and the new library data tool Benchmark from the **Public Library Association (PLA)**. **The challenge:** Public libraries struggle to make the data they collect and their impact meaningful and memorable to stakeholders.ⁱ **IMLS:** This project meets agency **Goal 1**, championing lifelong learning, **Objective 1.2** support the training and professional development of the museum and library workforce. **LB21:** This project meets program **Goal 3** enhance the training and professional development of the library and archival workforce, **Objective 3.3** create and/or refine training programs to build library and archival workforce skills, with a particular focus on cultivating creative skills and self-directed learning opportunities for workers. **Funds requested:** UIUC and PLA request total sponsor costs of \$757,118, and will provide \$272,642 in cost share. **The results:** Together, two toolkit pathways will provide the guidance and evidence libraries need to tell powerful impact stories to communities and stakeholders.

Project Justification. With the DSTL, library staff can train themselves, immediately iterating on suggested story structures and data visualizations to tell compelling library impact stories. The DSTL **builds on prior data work**, including evaluation models and IMLS-funded projects that have supported more robust data infrastructure for public libraries since 2006.ⁱⁱ Specifically, it builds on Benchmark, released in 2022, as a collaborative effort to develop one tool that will serve multiple needs. The DSTL **meets demand in libraries**. Interest has been overwhelming, with 680 registrants for the [first DSTL open workshop in fall 2022](#). Forty librarians from 26 states comprised our Core Design Team. We have presented this work at seven conferences from May to September 2023, including ALA and RIPL, in Wisconsin, Illinois, and Florida. Responses to our fall 2022 survey came from 12 states. Thanks to an IMLS planning grant, so far we have collaboratively produced a *design* for the toolkit user experience and a [partially interactive demo](#) for crafting data stories. As interest demonstrates, this work is timely and has potential to transform the world of public library impact communication. The DSTL **will educate staff at libraries with any level of data expertise**. Library staff struggle with fears of data and/or story and with having sufficient time, tools, and training. The toolkit design is based on fifteen years of teaching storytelling, seven years of data visualization and six years of data storytelling as well as qualitative research into librarians' data storytelling needs. (McDowell PLQ 2023) Complementary create/explore paths will reinforce story ideas with data and data insights with story, providing a self-guided pedagogical structure for all library staff.

Project Work Plan. The DSTL will offer two paths: **create** from everyday storytelling knowledge to structured data stories; and **explore** from benchmarking data visualizations to recommended story structures. Library staff can *create* a story template by choosing their motivation, argument and evidence, narrative strategy, and audience. Like a choose-your-own-adventure book, each choice will generate a different data story. Or they can *explore* data about their libraries benchmarked against their peers, using the available evidence with recommended arguments and narrative structures to build stories. Both paths will include data, visualizations, and story crafting guidance.

DSTL Paths	Data	Visualization	Story	Endpoint
Create	Local library data	Upload option for data with downloadable visualization suggestions	Motivation, classic impact arguments, narrative structures, and audience attitudes	Guide for crafting visualizations and a compelling story
Explore	Pre-loaded library data with peer comparisons	Local, national, and peer data visualized for immediate use	Narrative structures, arguments, and data as evidence	Downloadable data story with visualizations

The DSTL create pathway will be freely available to all libraries everywhere. PLA Benchmark is sustained by a subscription model; the dynamic explore pathway will be available to subscribers, with static story templates freely available to all users. This project will fund access for 10 library subscriptions in years 2 and 3. In **Year 1**, we will **design and implement** these two interactive pathways. In **Year 2** we will **test and refine the toolkit** with novice and expert users, leveraging the planning grant network of libraries with strong diversity track records. In **Year 3** we will **disseminate the DSTL** and qualitative research results from the design process.

Project Results. Imagine that a public library wants to understand their **digital equity** impact. If arguing for a new digital equity initiative, based on previously collected data, they will **create** a story template by choosing from a set of options. Selecting a *classic argument* (e.g. addressing library deficits); a *motivation* (e.g. justification); a *narrative structure* (e.g. transformation); and an *audience attitude* (e.g. mixed positive and negative) will produce a guide to creating a compelling data story tailored to their library’s data, context, and goals. If benchmarking their current impact, they will **explore** data from the PLA Technology Survey, IMLS Public Libraries Survey, and census, all augmented with story-crafting guidance. *Digital equity data* would include visualizations of percentages of households without broadband, public library computer use per capita, and more. This path will augment data and visualizations with *arguments* and *narrative structures*, for example, combining serving the needs of communities (research-based argument example) with new services that would transform the library’s impact (research-based narrative structure). The toolkit will produce a dynamic, downloadable report they can share with stakeholders. Together, the two pathways will provide the guidance and evidence libraries need to tell powerful impact stories in ways that will resonate for their communities.

Budget Summary. Budget Summary. UIUC and PLA request total sponsor costs of \$757,118, and will provide \$272,642 in cost share. Sponsor and cost share costs are: 1) Salaries and Wages: \$0 sponsor, \$93,197 cost share; 2) Benefits: \$0 sponsor, \$37,913 cost share; 3) Travel: \$5,500 sponsor; 4) Supplies etc: \$990 sponsor; 5) Subawards: \$226,282 sponsor, \$64,701 cost share; 7) Student Support (direct costs): \$352,451 sponsor; 7) Other costs: \$13,500 sponsor; 8) Indirect costs: \$158,395 sponsor (of which \$132,032 are Student Support), \$76,831 cost share. Cost share requirement is calculated by deducting student support total direct costs (\$352,451) and student support indirect costs (\$132,032) from the total sponsor budget: \$757,118 - \$484,483 = \$272,635.

ⁱ McDowell, K. (2023). Library Data Storytelling: Obstacles and Paths Forward. *Public Library Quarterly*, No. AHEAD-OF-PRINT, 1-21 <https://doi.org/10.1080/01616846.2023.2241514>

ⁱⁱ Including outcome-based evaluation concepts and practices; PLA’s Project Outcome; the Research Institute for Public Libraries (RIPL); Measures that Matter (MtM); and since fall 2022 Benchmark: Library Metrics and Trends, a joint initiative of PLA and the Association of College and Research Libraries (ACRL)