



Learning and Leading: An evaluation of the Digital Skills for Digital Librarians project

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A report prepared for the Mozilla Foundation

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ABSTRACT

"Web literacy" describes a critical set of skills needed to participate online, including how to navigate the internet, understand basic web mechanics, and safely share information. Using materials developed by the Mozilla Foundation, the Digital Skills for Digital Librarians project piloted web literacy skills training in eight public library systems and one graduate program in order to equip library staff with the knowledge needed to meet the growing digital needs and desires of their communities. This evaluation reports on the successes and challenges faced by the pilots as they adapted the web literacy curriculum to serve the needs of their public library staff and patrons.

KEYWORDS

Web literacy, digital skills, public libraries, professional development

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Preface

This report, prepared for IMLS and the Mozilla Foundation, shares the evaluation of the Digital Skills for Digital Librarians project, used for reporting purposes, and for shaping follow-on project activities.

The full project commenced in January 2016 and concluded in December 2017. As originally envisioned, the project was expected to take place between January 2016 and December 2016. This timeline was twice extended, which allowed the libraries and the Mozilla Foundation additional time for trainings and to further adapt the curriculum.

As a reader of this report, it will be helpful to note that the report primarily represents the evaluation that was conducted on the first phase of piloting activity, which took place between June 2016 and March 2017. The extension of the project, however, presented an opportunity to extend the initial evaluation. As such, the Addendum of the report shares the results of the project's extension through December 2017. By including these additional results in the Addendum, our intent is to provide readers with insight into what additional time and effort can accomplish in a project of this nature.

The Evaluators were pleased to support this important work as a learning partner, and thank the Mozilla Foundation and the pilots for the opportunity to engage with the project in an open and participatory way.

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The Technology & Social Change Group
University of Washington Information School

Executive summary

Background

Between June 2016 and December 2017, the Digital Skills for Digital Librarians project piloted web literacy skills training in eight public library systems and one graduate program in the United States. The project aimed to equip library staff with core web literacy skills and competencies using curricular materials developed by the Mozilla Foundation. In doing so, the project sought to support public library efforts to respond to the growing digital needs and ambitions of library patrons, while positioning libraries as community leaders in web literacy skill development. For Mozilla, the term “web literacy” describes a critical mixture of skills needed to participate in the digital world, including how to navigate the internet, understand basic web mechanics, and meaningfully contribute and share information online.

The project had three main objectives:

1. Adapt and refine Mozilla’s web literacy skills, curriculum, tools, and resources for library staff and pilot test with a diverse public library audience
2. Develop evidence-based digital badges that are interoperable, represent an individual’s skills, interests, and achievements, and can convey library staff’s core digital skills and competencies
3. Explore pathways and develop strategies for scale and sustainability, in collaboration with key stakeholders

Project efforts were led by the Mozilla Foundation. Mozilla was supported by a team of researchers from the Information School at the University of Washington, including two of its research centers, the US Impact Research Group and the Technology and Social Change Group (TASCHA). The project was supported by a grant from the Institute of Museum and Library Services (IMLS), the Laura Bush 21st Century Librarian Program (LB21) grant. Eight organizations piloted the web literacy curriculum and training.

Evaluation approach

This evaluation report examines the experiences of the pilot libraries and MLIS program with respect to *learning* to use and implement web literacy resources, *adapting* the resources to fit the needs of the library (or library students), *leading* web literacy trainings, and *aligning* web literacy within the existing organizational culture. It also includes a review of early outcomes and a discussion of issues applicable to the wider expansion of the web literacy curriculum to other public libraries. The main report aims to answer three evaluation questions:

1. In what ways have the different pilots taken up the curriculum, making it their own?
2. What successes and challenges have the pilots faced while adapting and implementing the web literacy curriculum?
3. What are possible pathways for scaling and sustaining the web literacy curriculum?

The addendum to the report answers an additional set of questions:

4. What have the project’s participants learned?
5. How has this experience supported participants’ professional growth?
6. Why do participants believe web literacy training is important for their constituents/community?

The primary intended users of the evaluation report are the Mozilla Foundation and IMLS. Other intended users include the pilot libraries and graduate program that participated in the project. The data used in this evaluation was collected from several sources, and can be grouped into three types: participant observation (e.g., the evaluators' participation in project activities), project documentation, and two rounds of pilot interviews.

Results

With support from the Mozilla Foundation, the pilots shaped and implemented web literacy trainings in a variety of ways to account for differences in their local audiences, library priorities, and professional development practices. In the range of approaches used, the pilots demonstrated that the web literacy materials, as well as Mozilla's approach to instruction, are versatile, engaging, and an effective way to learn and teach across a variety of public library environments.

As a result of web literacy training provided in the libraries, nearly 300 library staff received instruction on basic web mechanics and how to contribute and safely share information online. From the perspective of interviewees, the pilot-led web literacy trainings were largely successful. Early indications of positive outcomes for participants included changes in knowledge, attitudes, and basic skills. Changes in behaviors were too early to detect. Unintended positive outcomes included early indications of potential organizational changes, such as trainers expressing an interest in incorporating Mozilla's style of interactive trainings into other professional development activities.

The most encouraging training results appeared to accrue to library staff with (1) sufficient digital literacy skills to meaningfully participate in the training, (2) limited previous exposure to the "write" and "participate" skills and competences (i.e., beginners), (3) comfort participating in Mozilla's style of experiential learning, (4) an understanding of how web literacy skills can be used at work, and (5) a library culture that prioritizes professional development and/or staff's learning endeavors despite capacity constraints.

The most notable project challenges involved: Mozilla's delayed development of the web literacy badges, a project timeline that did not account for the academic schedule at University of Washington, and a lingering sense among a small minority of training participants that web literacy skills were not directly pertinent to their work with library patrons.

Promising approaches for sustaining the web literacy curriculum include: creating or leveraging flexible peer learning structures in library organizations that allow staff to practice and expand their own skills while supporting ongoing web literacy efforts at their library; building on the web literacy resources and curriculum to appeal to a broader base of library staff skills (e.g., those with lower digital literacy skills or with more developed web literacy skills); adapting web literacy resources to meet specialized needs (e.g., learning styles, rural users, remote or asynchronous users); engaging more MLIS programs; formalizing relationships with library support organizations; and strengthening personal relationships across organizations that provide Mozilla-based web literacy training.

As documented in the Addendum, the evaluation results of the project extension include:

- Project leaders identified, navigated, and problem-solved logistical challenges.
- Project leaders learned how critical staff buy-in is to the success of their efforts.
- Training participants demonstrated new skills and attitudes.
- Project leaders and staff trainers grew more confident and stepped into new roles.
- Project leaders benefited from opportunities to share and connect across pilots.
- Patrons can expect to receive better service from staff.

- Patrons can gain a clearer understanding of current events and safe uses of technology.

1 Overview: The Digital Skills for Digital Librarians project

1.1 The project

The Digital Skills for Digital Librarians project piloted web literacy skills training and credentialing in seven public libraries across the country and one library and information science (LIS) graduate program. Using curricular materials developed by the Mozilla Foundation, the project aimed to equip library staff with core web literacy skills and competencies, supporting their ability to respond to the evolving digital needs and ambitions of library patrons, as well as positioning libraries as community leaders in web literacy opportunities. The project had three main objectives:

1. Adapt and refine Mozilla’s web literacy skills, curriculum, tools, and resources for library staff and pilot test with a diverse public library audience
2. Develop evidence-based digital badges that are interoperable, represent an individual’s skills, interests, and achievements, and can convey library staff’s core digital skills and competencies
3. Explore pathways and develop strategies for scale and sustainability, in collaboration with key stakeholders

Project efforts were led by the **Mozilla Foundation**, an organization with an ongoing commitment to educating and empowering internet users to learn to read, write, and participate on the web, as well as building leaders by growing a global cadre of educators, researchers, coders, etc., and establishing the community as the classroom through their experiential learning model.¹

Mozilla was supported by a team of researchers from the **Information School at the University of Washington**, including two of its research centers, the **US Impact Research Group** and the **Technology & Social Change Group (TASCHA)**.² The team conducted background research and field work to inform project design, implementation, and evaluation. This team also analyzed project data and produced this report.

Project activities were supported by a grant from the **Institute of Museum and Library Services (IMLS)**: the Laura Bush 21st Century Librarian Program (LB21) grant, which supports learning opportunities for library professionals, helping libraries keep pace with the changing learning and information needs of the American public.

The project commenced in January 2016 and ended in December 2017. The timeline can be broken into three periods: project development (January 2016 through May 2016), Phase 1 implementation (June 2016 through March 2017), and Phase 2 implementation (April 2017 through December 2017). The timeline initially ran only through December 2016 but was twice extended, allowing the pilots additional time to provide on-site trainings and further adapt the curriculum. This evaluation focuses on Phase 1 implementation. In addition, an evaluation of the follow-on Phase 2 activities can be found in the Addendum.

1.2 The pilots

In May 2016, eight organizations were selected to participate in the Digital Skills for Digital Librarians project,

¹ From the narrative proposal dated August 14, 2015

² Henceforth referred to as “the Evaluators”

described as “an opportunity to lead innovative work in the area of web literacy training and credentialing that will inform future work with public libraries.”³ In addition to being tasked with piloting the Mozilla web literacy skills training and badges with their staff, staff from the pilot libraries were invited to attend a training led by Mozilla and were encouraged to actively participate in the ongoing development of the web literacy resources. As described in the request for proposal (RFP):

*Library staff will have the opportunity to participate in Mozilla developed and facilitated in-person and online interactive train-the-trainer workshops using Mozilla’s open source curriculum, tools, and credentials. The total amount of training can be covered over a two-day period. Library staff will have the opportunity to provide real time and continuous feedback on what works to help Mozilla staff adapt curriculum, tools, training, and credentials to meet the needs of library staff in diverse settings. Library staff will be expected to practice and/or teach other library staff their new skills during the pilot period. Pilots will provide fertile ground to help the library field learn more about how best to design and deliver web literacy professional development and credentialing for library staff.*⁴

The eight organizations selected included five public library systems and two public library consortia, along with one MLIS program selected to pilot the curriculum with graduate students. The pilots participating in implementation included:

- Anythink Libraries (Adams County, Colorado)⁵
- Cleveland Public Library, with Willoughby-Eastlake Public Library (Cleveland, Ohio and Lake County, Ohio)⁶
- Multnomah Public Library (Multnomah County, Oregon)
- Providence Public Library (Providence, Rhode Island)
- Toledo Lucas County Public Library (Lucas County, Ohio)
- Central New York Library Resource Council (CLRC) in Central New York
- Metropolitan New York Library Council (Metro) in New York City and Westchester County
- The Master of Library and Information Science (MLIS) program at the Information School at the University of Washington (UW iSchool)

Most of the libraries are larger systems with a mix of urban and suburban communities; however, one consortium (CLRC) and one library system (Anythink) feature a mix of library sizes and locations, including some town and rural locations. (A short description of each pilot is provided in Annex 1.) The contact person (or people) at each library included up to three people with oversight over the staff training program. At the UW iSchool, an assistant professor was the sole contact person.

³ Request for Proposals, ILMS Pilots, 2016

⁴ *ibid.*

⁵ Throughout this report, libraries are referenced using the first word in their name (for instance, “Toledo Lucas County Public Library” has been shortened to “Toledo”), with the exception of the two library councils in New York State, which have been abbreviated as “CLRC” and “Metro.”

⁶ Throughout this report, the term “libraries” refers to eight public library systems: the seven listed above, as well as Willoughby-Eastlake Public Library. Willoughby is technically part of the Cleveland Public Library pilot, but because they operate independently of Cleveland and participated in interviews, Willoughby’s views are counted as their own.

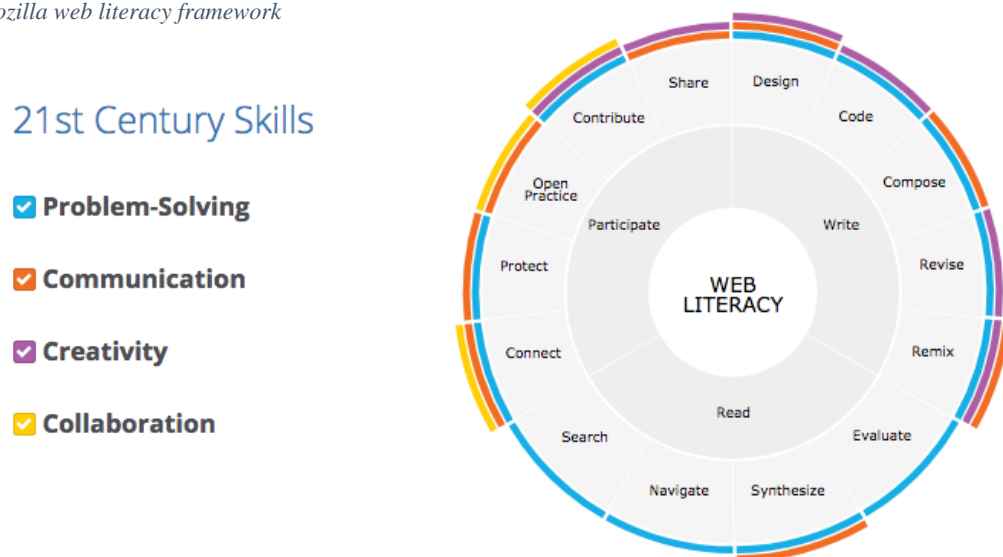
1.3 The web literacy curriculum

For Mozilla, the term “web literacy” describes a critical mixture of skills needed to participate in the digital world, including how to navigate the internet, understand basic web mechanics, and meaningfully contribute and share information online. Web literacy skills are grouped into three areas: read, write, and participate. Specifically:

- **“Read”** is how we explore the web. Web literate individuals understand basic web mechanics such as the difference between names and addresses on the web, and how data is linked and moves through the infrastructure of the web. They can evaluate web content, and identify what is useful and trustworthy.
- **“Write”** is how we build the web. Web literate individuals can transform a word into a hyperlink and add media to websites. As abilities are honed, one becomes more adept at remixing other users’ content and understanding or writing code.
- **“Participate”** is how we connect on the web. It includes interacting with others to making your own experience and the web richer to working in the open. It also includes having a grasp of security basics, like protecting your online identity and avoiding online scams.⁷

Web literacy skills are discussed in combination with 21st century skills, such as collaboration, communication, creativity, and problem-solving.⁸ Figure 1 shows the interrelated skills and competencies.

Figure 1. Mozilla web literacy framework



Mozilla has developed a variety of conceptual and hands-on resources over the last several years. Those used during the Digital Skills for Digital Librarians project included a framework for entry-level web literacy and 21st century skills [see Figure 1], a training curriculum featuring dozens of adaptable training activities, open source tools like Thimble and X-Ray Goggles, and a system for issuing badges to learners that demonstrate the required competencies.

⁷ <https://mozilla.github.io/content/web-lit-whitepaper/>

⁸ <https://mozilla.github.io/content/web-lit-whitepaper/>

2 Evaluation approach

2.1 Questions and purpose

This evaluation report synthesizes results from data collected during the Digital Skills for Digital Librarians project. More specifically, it examines the experiences of the pilot libraries and MLIS program in regard to *learning* to use and implement web literacy resources, *adapting* the resources to fit the needs of the library (or library student), *leading* web literacy trainings, and *aligning* web literacy within the existing organizational culture. It also includes a review of early outcomes and a discussion of issues applicable to the wider expansion of the web literacy curriculum to other public libraries and library schools.

The report aims to answer three evaluation questions (EQ):

- EQ 1: In what ways have the different pilots taken up the curriculum, making it their own?
- EQ 2: What successes and challenges have the pilots faced while adapting and implementing the web literacy curriculum?
- EQ 3: What are possible pathways for scaling and sustaining the web literacy curriculum?

The intended users of the evaluation report are IMLS and Mozilla Foundation. The report provides summative findings for both organizations and may be used for reporting purposes. For Mozilla, the evaluation also plays a formative role as the project continues into its second phase, and beyond as Mozilla continues to implement digital badging in the public library community and to refine the core web literacy curriculum and training tools for a professional adult audience. Other intended users include the pilots that participated in the project, particularly those that have continued to offer the web literacy trainings.

The design and implementation of the evaluation have been shaped by two evaluation approaches: utilization-focused evaluation and developmental evaluation.

- **Utilization-Focused Evaluation** is an approach based on the principle that an evaluation should be judged on its usefulness to its intended users. Evaluations should be planned and conducted in ways that enhance the likely utilization of both the findings and of the process itself to inform decisions and improve performance.⁹
- **Developmental Evaluation** is an approach that can assist social innovators to develop social change initiatives in complex or uncertain environments. Its originators liken their approach to the role of research and development in the private sector product development process because it facilitates real-time, or close to real-time, feedback to program staff thus facilitating a continuous development loop.¹⁰

2.2 Data collection

The data used in this evaluation was collected from several sources, which can be loosely grouped into three categories: participant observation, project documentation, and pilot interviews.

Participant Observation

Working with Mozilla during the project development phase, it became clear that the Evaluators would best serve

⁹ http://www.betterevaluation.org/en/plan/approach/utilization_focused_evaluation

¹⁰ http://www.betterevaluation.org/en/plan/approach/developmental_evaluation

the needs of the project by engaging with Mozilla and the pilots in an open and participatory way. In doing so, the Evaluators embraced Mozilla's model of "community as the classroom" to take part in the pilots' journeys as the project progressed. The Evaluators also hoped to build some degree of trust with the pilots during the piloting period to ensure the pilots were comfortable with the Evaluators and did not feel they themselves were being evaluated.

As such, the Evaluators were present in person or on the phone for a number of project activities, documented in the data sources listed below.

Activities:

- Project kickoff meeting held in Chicago (June 7, 2016)
- Project-wide web literacy training held in Cleveland (August 25, 2016)
- Community calls, which were monthly phone conversations organized by Mozilla that allowed for all of the pilots to provide status updates and discuss issues as they emerged. Mozilla also used the calls to provide the pilots with tips on instruction methods, assessment strategies, and other topics.
- Badges working group calls, which were periodic phone conversations organized by Mozilla for pilots to participate in the development of badges for credentialing public library staff. All pilots, with the exception of Toledo, joined this group.

Data Sources:

- Notes taken by the Evaluators during the phone calls and in-person events were captured using Etherpad, which provided a web-based editor for typing and displaying notes from community calls and badges working group calls in real-time.
- Discourse, which provided an online forum for project participants to share ideas, resources, and questions

Project Documentation

Project documentation included plans and resources shared between Mozilla and the pilots.

Data Sources:

- Pilot proposals
- Pilot work plans and revisions
- Remixed web literacy lesson plans shared by pilots
- Mozilla's notes from check-in calls with the pilots in September and October of 2016

Pilot interviews

The Evaluators conducted semi-structured phone interviews with the pilots in November 2016 and February/March 2017. Interviews were conducted over the phone. Each interview included up to three people: the primary contact at each pilot site and/or anyone else the pilot wanted to include on the call. Given the collaborative nature of the project and evaluation, the Evaluators approached each interview as a conversation, engaging with interview participants in a personable way, and being careful not to make the pilots feel as if they themselves were the subject of evaluation.

Mozilla provided guiding questions, which the Evaluators used to structure the conversations. The guiding

questions were as follows:

1. What did you learn about web literacy that you did not know before?
2. What was most valuable about the Mozilla web literacy training?
3. How did you adapt the Mozilla web literacy training for your pilot?
4. What were the challenges in providing training to others?
5. How easy was it to adapt and remix content in order to train others?
6. How does Mozilla's web literacy training compare and contrast to existing approaches to ongoing professional development in the pilot organizations?
7. What incentives/motivations worked to get your pilot interested in learning web literacy skills and earning badges?

The first round of interviews, conducted in November 2016, ran between 15 and 30 minutes in length, while the second round, conducted in February and March of 2017, ran between 30 and 45 minutes. All interviews were audio recorded. Data was collected differently for each round of interviews. For the first round, two researchers participated in each interview, with one researcher asking questions while the other took extensive notes on her laptop. The notes were then checked against the audio recordings for gaps, summarized, and shared with the Mozilla Foundation for formative feedback purposes. The second round of interviews was conducted by only one researcher, and in lieu of notetaking during the interview, the audio files were transcribed.

Data Sources

- Audio recordings of all interviews
- Notes taken during the first round of interviews
- Summaries of notes taken during the first round of interviews
- Transcripts of the audio recordings for the second round of interviews

2.3 Data analysis

Throughout the project, the Evaluators reviewed most data sources as they were created, including lesson remixes, Discourse posts, and work plan updates. Comprehensive data gathering began in the lead-up to the second round of interviews, when first round interview notes, community call notes, and badging call notes were organized by pilot site and annotated. Following the second round of interviews, second round transcripts were coded and analyzed thematically using Microsoft Excel. Earlier data was then revisited and incorporated into the thematic analysis, by coding for supplemental data using select categories from the second round of interviews. All quotes in this report have been drawn from interview transcripts.

2.4 Background Research

Early in the Digital Skills for Digital Librarians project, even prior to pilot selection, the Evaluators conducted desk research and primary research to answer some of Mozilla's questions and contribute to project strategy development. During the preparation of this report, components of that work were revisited, including the results of primary data collection.

Desk research

Data was gathered from a wide variety of sources and analyzed to help situate the web literacy curriculum and badging credentials within the library profession. Attention was given to the field's current practices and needs with respect to professional development and technical competences. Desk research covered a range of topics,

including:

- A comparison of digital literacy frameworks and resources
- A review of public library professional development opportunities and state-by-state requirements
- A review of standards related to librarian competences, particularly as they relate to digital skills
- MLIS school curriculum analysis and readiness

The information was used in various ways, including to inform pilot selection and to suggest adaptations and improvement of Mozilla's web literacy curriculum.

Primary research

The Evaluators conducted one-on-one interviews in the spring of 2016 with 22 individuals, including thought leaders in the library field, managers, and frontline staff from a variety of library types. Interview participants were asked about what works, what doesn't work, what is missing from existing digital and web literacy resources, and what opportunities might exist to standardize or scale digital literacy programs for the library field. The results of the interviews were used to create user personas and scenarios, help further refine the web literacy curriculum, and ground conversations with the pilots.

2.5 Limitations

Mozilla and all of the pilots were very cooperative in providing the Evaluators with access to data. The following limitations of the evaluation should be noted.

Limited ability to report on project outcomes. This report discusses only the immediate outcomes of the trainings, with the assumption that outcomes observed early on have a bearing on longer-term outcomes. Longer-term outcomes related to participants' behavioral change, organizational change, or impact on patrons are beyond the scope of the evaluation and would require a longer evaluation period.

Limited access to web literacy training participants. This evaluation was not informed by the voices of those library staff and library students who participated in the web literacy trainings. Rather, the views represented reflect the perceptions of the contact persons at each pilot site, many of whom led the trainings. Several of the pilots conducted training post-assessments, and were able to speak to the actual experiences of training participants by referencing the feedback they received. Also, some of the pilots voluntarily provided the assessment data to the Evaluators, who reviewed some of it to verify the interview participants' accounts of the trainings, and noticed no major discrepancies.

Paperwork Reduction Act (PRA). The Evaluators' decision not to collect data directly from training participants was influenced in part by considerations related to the PRA, a federal regulation designed to reduce the potential burden Americans might feel due to excessive amounts of federally sponsored data collection.¹¹ PRA requirements did not apply to this project due to this project's small sample size (n=8), but the Evaluators wanted to remain true to the spirit of the measure while ensuring the project's sample size stayed below ten.

¹¹ <https://www.hhs.gov/ocio/policy/collection/infocollectfaq.html>

3 Evaluation results

The results of this evaluation assess the extent of the web literacy curriculum's versatility, ease and effectiveness of use, and momentum as the project enters its second phase. Evaluation results are discussed across four subsequent sections that respond to the three evaluation questions (EQ).

- Descriptions of how the pilot libraries and MLIS program developed and implemented the web literacy training to make it their own (EQ 1) are provided in the sections on Pilot approaches (3.1) and Pilot experiences (3.3).
- Project successes and challenges (EQ 2) are described in the sections on Pilot results (3.2) and Pilot experiences (3.3)
- Possible pathways for scaling and sustaining the web literacy curriculum (EQ 3) are touched on in the section on Pilot plans for the future (3.4) and developed further in the Discussion section of the report.

3.1 Pilot approaches

One purpose of this pilot was to test the flexibility and adaptability of the web literacy curriculum across a variety of public library environments. In the variety of approaches used, the pilots demonstrated that the materials, as well as Mozilla's approach to instruction, are quite versatile.

3.1.1 Objectives

The objectives of the pilots' trainings were not pre-determined by Mozilla. The pilots were free to develop and pursue their individual goals. According to their proposals, all of the pilots sought to strengthen the technical skills of their staff or MLIS students. Few pilot participants mentioned which specific digital skills they wanted their staff to develop at the project's outset; instead, they started prioritizing skills as they curated the web literacy resources to design their trainings. Half of the pilots mentioned a desire to change staff attitudes about technology, a need that has been recognized more broadly in the library profession, as shown in the IMLS 21st Century Libraries Skills report.¹² Only one pilot, the UW iSchool, explicitly mentioned a desire to build the instructional skills of participants.

With respect to longer-term desired outcomes, four libraries saw this pilot as a way either to support the library field by building a community of practice around web literacy, or to support their own organization's efforts to advance a strategic plan involving web literacy professional development. Two of these four libraries mentioned changes in services, such as offering better patron support and innovative technology programs/instructions. Finally, these two libraries also mentioned wanting to support patrons' technology skills, which was a more a distal outcome for this project.

3.1.2 Training formats

The pilots differed in their approaches to web literacy instruction, and in doing so demonstrated the flexibility of the curriculum across different public library environments. The inclusion of an academic program further tested the curriculum's adaptability and relevance. A description of the variation across the pilots' training formats follows.

Standalone vs program integrated. Most pilots created new, standalone training programs, and organized

¹² <https://www.imls.gov/publications/museums-libraries-and-21st-century-skills-report>

training sessions that hadn't been offered before. Exceptions included:

- Anythink: training activities were incorporated into an annual training event, Tech Fest
- Providence: the main thrust of their efforts was to integrate training into existing programming
- UW iSchool: the independent study opportunity offered was designed by one Assistant Professor and was fairly self-contained.

Intended training formats. The pilots planned to use one of two methods: a training of trainers (TOT) model or a cohort training model.

- **TOT.** Four libraries started the project with the intention of developing a TOT model (Anythink, Cleveland, CLRC, and Metro). With a TOT model, trainers in the organization learn the material, then work with other staff to build their skills. Libraries had some variations in the proposed execution of these TOT models, including:
 - Adapting materials for their contexts
 - Improving their intranet-hosted training resources
 - Sharing materials with others in their region or system
 - Structuring the TOT as a continuing education offering to members and using badges as a credentials
- **Cohort trainings.** Two libraries (Providence and Toledo) and the UW iSchool proposed a cohort training model where a teacher takes the web literacy content and trains a small group of people. The iSchool proposed to adapt the curriculum for MLIS students, while Toledo proposed to adapt content for staff. Providence planned to implement web literacy training with few adaptations to the curriculum and based on Mozilla's approach to training.

Opt-in vs opt-out participation. For four libraries, staff's participation in web literacy training was voluntary, and the process of recruiting participants added some degree of challenge at the outset (Cleveland, Multnomah, Providence, and CLRC). The MLIS program (UW iSchool) was the most voluntary in nature, with students under no expectation or obligation to enroll in the web literacy independent study opportunity. At other pilot locations, participants were chosen by management, either with or without an opt-out option. For instance, management at three libraries (Metro, Willoughby, and Toledo) invited participants on the basis of branch/library location, department (e.g., young adult, children's), nature of programs offered (e.g., after-school programs, adult-based education programs), and day-to-day job responsibilities. Then there were mandatory trainings, too. At Anythink, for instance, every employee in the system was expected to attend Tech Fest, with the exception of people who had other obligations, like shifts at a second job.

The pilots were also split, almost evenly, on who they chose to offer web literacy training to: only professional library staff (e.g., credentialed librarians), professional plus para-professional staff (e.g., library assistants), or to all, including support staff (e.g., office assistants). Results were mixed as to whether the degree of staff homogeneity or heterogeneity made any difference with respect to training effectiveness.

3.2 Pilot results

Across the eight pilots, nearly 300 library staff and one MLIS student gained hands-on experience with Mozilla's web literacy materials. The median number of staff trained at the eight libraries was 20, with a range from eight to 140 participants.

All of the libraries had relatively good turnout, and most were able to meet their own goals in regard to the number of staff trained (See Annex 1). Two libraries fell slightly short of their goals, by about five people each, due to somewhat lower attendance than expected at one CLRC training location and shifting priorities at Toledo. The UW iSchool was not able to offer the course it had planned because the Digital Skills for Digital Librarians timeline did not provide enough time for the university to set up a fall course, and so the web literacy course was offered as an independent study opportunity instead, which only one student completed.

Two libraries exceeded their initial targets: Anythink, whose training plans were expanded from a 12-person training to a 160-person tech summit, and Willoughby, who began as a participant in Cleveland's pilot, but developed into a de facto ninth pilot site with 18 staff trained.

3.2.1 Training outcomes

The pilots reported predominantly positive results from the web literacy trainings, describing a range of accomplishments related to participant effects and organizational changes. Indications of negative outcomes were limited and generally restricted to isolated instances of negative participant feedback and comments about opportunity costs (e.g., competing priorities).¹³

3.2.1.1 Participant effects

Library staff who participated in the web literacy trainings were most often described as enjoying and benefiting from the experience. Positive participant outcomes centered on feelings of increased confidence and hands-on exposure to technology. There was a limited amount of negative feedback from participants who felt the training was not relevant to their work. Participant outcomes noted by the pilots included:

1. Feeling more confident with and overcoming anxieties around technology use
2. Picking up web literacy skills and learning how the internet works
3. Demonstrating an interest in developing more advanced technology skills
4. Feeling better prepared to assist patrons on topics related to the web literacy curriculum
5. Incorporating web literacy skills and tools into existing programs
6. Isolated instances of participants expressing the feeling that web literacy was not relevant to their work

Feeling more confident with and overcoming anxieties around technology use

Most of the libraries mentioned how training participants were able to challenge their fear barriers around technology and win. These participants came out of the training feeling more confident and better prepared for future technology challenges. For example:

I could see some anxiety in the beginning of all the training sessions when we would mention things like HTML and just like, "Oh, my gosh, how am I going to be able to handle this?" But by the end of the training

¹³ This summary captures participant outcomes indirectly, as the Evaluators interviewed the designated contact people at each pilot site but did not speak directly with training participants. Furthermore, the proportions of pilots indicated ("few," "half," "many") are likely conservative in nature: they represent the number of pilots who mentioned an outcome without any specific prompting. Instead, the pilots were asked for their perspective on how well the trainings went and what feedback they received from participants.

sessions, people felt pretty empowered and really enjoyed it.

Picking up web literacy skills and learning how the internet works

Most of the libraries also saw success in having effectively moved participants from a place of “not [knowing] anything” to “knowing a little bit” about how the internet worked. They spoke about how the training provided “a taste” of skill development rather than in-depth training. As stated by one trainer:

After the first set of sessions... the “Read” block served as that initial assessment... I said, “Okay, exposure is what I’m gonna accomplish here.” And it’s a great accomplishment. To be able to show people these are things that you can do, this exposure is really important.

The pilots also spoke about how participants acquired a deeper understanding of how the internet works. The curriculum helped fill gaps in participants’ knowledge and helped them to see the bigger picture. In the case of one participant:

She had talked to her son about certain things in the past but never understood how coding worked [or what was happening] behind the website. So actually being able to manipulate the code, she was like, “Oh!” ... She has worked in the library field for 20 or 30 years or something and it just really clicked. For once she got this concept of how everything was connected.

Motivating participants to develop more advanced technology skills

The pilots described the curriculum as a starting point for participants’ skill development, rather than as an approach for advanced skill development. However, at least three pilots spoke about the important role that the web literacy trainings played in creating an entry point for participants’ interest in pursuing further skill development. New exposure to web literacy combined with increased confidence had motivated some participants to keep learning. As one pilot explained: “*There were people who said, ‘I want more.’ I ended up pointing those people to ... other online resources and say, ‘This is how you start. This is how you get going with this and we can go from there.’*”

Feeling better prepared to assist patrons on related topics

Half of the libraries also noted that training participants left the training feeling more prepared for future interactions with patrons on technology-related topics.

The evaluation that we got back both from the trainers and from the candidates were all very positive, very high ratings as far as the effectiveness of the training, whether it was something that they would carry on and use.

This sense of preparedness was attributed to a combination of increased confidence, knowledge, and enthusiasm among participants, but also simply that library staff had found new web literacy resources that they could use in their work, even if only during brief interactions with patrons. One pilot valued how the trainings “*[introduced] the idea that you can share small pieces of information. Like after school, when the kids come to the library and they’re looking for help... [One participant] was really thrilled just to be able to share some small pieces of web literacy with a couple of kids at a time.*” Similarly, the UW iSchool pilot noted how Mozilla’s web literacy framework had become a useful tool to refer to when discussing literacies (e.g., web, digital, data, information) with students and other

researchers.

Introducing web literacy skills and tools into existing public programming

From the outset, one library had planned to formally integrate parts of the web literacy curriculum into their patron programming during the piloting period. Two libraries intended to do so shortly thereafter. Additionally, one other library found library staff participants were eager to start using the web literacy resources with patrons and had begun to do so on their own.

We haven't done any formalized integration into patron programming but... ambassadors who were trained are taking it upon themselves to offer either some of the activities outright, like hacks and news... Shortly after one of the training sessions, the ambassador went back and said, 'I did this with the kids. They absolutely loved it.' ...To have staff members go back and start incorporating these skills and these lessons and these activities into patron programming, that is absolutely amazing for our organization. And in five years that I've worked here, I can count on one hand the number of times that that's happened so that is a huge success, and I credit Mozilla a lot for the way they created the curriculum and how interactive it is.

Isolated instances of negative feedback

Despite general agreement across pilots that training participants enjoyed and benefited from their experience, most pilots could still point to at least one individual who was noticeably frustrated in a training session. Reflecting on the resistance they encountered, the trainers attributed these participants' frustration to some combination of low skills, anxiety about technology, unease with collaborative learning, the opinion that web literacy was irrelevant to their position, or worry about how the library or their role might change. For example:

There was only one staff member who was very, very, very resistant and vocal throughout the whole class ... and didn't really want help from anyone else in the class, just wanted information directly from the instructor. [This person] really had trouble understanding [the lessons] and just why we were doing this, and I think just felt maybe a little threatened that she wouldn't be able to understand it and somehow that would negatively impact her job performance or something like that.

The library pilot that encountered the most resistance did so while providing web literacy instruction to small, rural libraries. Those participants had more difficulty making time for the training, saw web literacy as less relevant to their role and to their communities, and had limited experience using digital technologies. The training needs of those learners differed from learners at other pilots:

There was one person who [asked], "When am I going to use a web browser?" and I'm like, "Well, you never know."

Questions of perceived relevancy

One potential outcome that was not explicitly defined by the project or the pilots in advance but seems particularly meaningful in hindsight, is the goal of leading participants to see their role, and the role of the public library, in advancing web literacy and a healthy internet, particularly as it applies to their community. Only one library explicitly mentioned this as an indicator of success, noting how participants who were initially reluctant to attend the training left with a clearer sense of why web literacy matters and how they can support it:

Interestingly after the training we held last week, some of those people that... didn't understand how it would fit into the library... walked away really excited with some program ideas for the public and they just had a whole different change of heart about what this training can do for themselves and for the public.

In several instances, a perceived lack of relevance was mentioned as a barrier to the success of the training, whether while recruiting participants, gaining buy-in from management, or adapting the web literacy tools for their audience. At two libraries, the trainers felt that even after the trainings, a significant number of library staff did not see how web literacy knowledge could be applied on the job. In this sense, it should be noted that an outcome described as “an increased perception of the relevancy of web literacy to the work of public libraries” was not achieved by all training participants, though it was widespread across the pilot sites. One pilot found that the demand for future web literacy trainings was weak because the web literacy needs of patrons was low:

[Overall, the participants] enjoyed [the training] but they didn't necessarily feel like it had a lot of relevance to what they would do day-to-day if they work in the library. And so, even though we had made some effort to establish the connections there... the feedback we got from the people who went through it is that the types of issues that our patrons have are really low-level issues. [Our patrons] don't have that kind of secondary curiosity about what they're looking at.

3.2.1.2 Organizational effects

While speaking with the pilots, it became clear that positive training outcomes extended from participants to their larger organizations in the form of changes in organizational culture and practices. Negative effects, at the organizational level, were confined to the opportunity costs of resources committed to web literacy training. Organizational outcomes noted by the pilots included:

1. Innovating on existing professional development practices: rethinking strategy, philosophy, and relationships
2. Improvements to information technology use in the workplace: enabling conversations to improve IT services, practices, and equipment
3. Opportunities for leadership within the library field: presenting web literacy ideas and tools to a larger audience
4. The opportunity costs when providing web literacy training

Innovating on existing professional development practices: rethinking strategy, philosophy, and relationships

Mozilla's curriculum and approach to instruction differs from how most of the libraries had been providing professional development training prior to this project. Half of the pilots suggested that the experience of learning and leading the web literacy curriculum may have longer-term effects on professional development practices. The clearest example of this are the libraries that plan to keep offering web literacy training after the pilot period ends, either due to anticipated ongoing demand (Metro) or plans to roll the training out to library staff system-wide (Cleveland, Willoughby, and Toledo).

The training experience also created new enthusiasm for professional development. According to one pilot, the library profession tends toward a “top down” and “data dump” approach to professional development. The new concept of being interactive made library staff excited. Another library saw similar enthusiasm and considered it a major leap forward:

I credit Mozilla a lot for the way they created the curriculum and how interactive it is. It has been a pleasure being part of that. [They] are getting people excited about learning—that's huge for us and I would say that would be our biggest success out of all of this.

For some pilots that already had strong professional development programs, Mozilla's curriculum aligns well with their existing approaches. Two pilots described their experience with the web literacy trainings as reaffirming their approach: "We're always looking for something new to enhance [our professional development]." Still, other pilots have ended the first phase of the piloting stage with a new question. In the words of one library:

I just got an email saying, "I wonder how we can do this in other ways for other subjects," and I guess I'm wondering the same thing... Like, "that was engaging and fun. How can we bring the energy into other things?" ... It's definitely made me rethink how I structure even a training on e-mail or something. I might take a slightly different approach.

Improvements to information technology use in the workplace: enabling conversations to improve IT services, practices, and equipment

Three of the pilots mentioned how the web literacy trainings had made it easier for staff to talk to each other (and IT staff) about issues in their own library related to passwords, internet routers, cookies, and malware. For one pilot, offering on-site trainings at several branches revealed equipment issues that, in addressing them, could present new opportunities for the library. That is:

Being onsite in all those places gave me a chance to see what the real technological barriers were that people were facing... They have all these old computers that are all crapped up with malware like this is a large business opportunity, this is an education opportunity. Being able to say, "Okay, this is why this is not just bad for you but bad for your patrons, let's talk about that," and that provides—it's a good conversation to have. So, the pilot, just how we ended up structuring it ended up providing this boon in relationships and opportunities for infrastructure investment and potential services for our organization to offer.

Opportunities for leadership within the library field: presenting web literacy ideas and tools to a broader audience

Participation in the Digital Skills for Digital Librarians project was framed as "an opportunity to lead innovative work in the area of web literacy training and credentialing" as described in the library RFP. Being the first libraries to pilot the web literacy curriculum nationally seems to have contributed to leadership opportunities in professional development practices and created new opportunities for the libraries. For example, Metro was asked to provide web literacy training to one of New York State's library councils, thereby supporting their ambition to provide professional development training to libraries throughout the state. CLRC presented on the web literacy curriculum at MozFest and has plans to present the badging program at the American Library Association's 2017 conference. In addition to Providence's plan to roll out an adult coding training program the library designed (Rhode Coders) that includes resources from the web literacy curriculum, the library has incorporated web literacy into their work on adult education and workforce development. They added web literacy into a curriculum designed to match the Northstar Digital Literacy Assessment and have also led a workshop:

I did a workshop at the National Transitions to College Conference back in November and that went really

well. We had over 30 participants in the room and they were from all over the United States. So, for an hour and a half I introduced them to the website and how the framework is organized, and then we did three or four activities and they participated in them.

The opportunity costs of providing web literacy training

Although early in the project many of the libraries felt the project's timeline was too short for them to be able to fully design, organize, and lead the quality of training they would have liked, most of their concerns abated once they began offering the trainings, found ways to make incremental improvements to individual lessons, and received positive feedback from participants.

However, for two libraries, the time spent on the project imposed two types of opportunity costs. For small rural libraries characterized by significant staffing constraints and a weak culture of professional development, the opportunity costs centered on staff time, and were only overcome because they received funding to participate in the pilot. As explained by one pilot:

[The time] limit is really, really crucial in smaller libraries. One of the reasons that we were able to do this [web literacy training] with them is because we [received some funding for our participation and] used the funding to pay people to be able to be in the room, because the libraries didn't have the time. Their budgets are so slim, and of those five employees that [a small library] might have, three of them, or four of them might be part-time. All of them might be part-time. The library director might be part-time. And that really plays into how difficult it can be to schedule all these people and get everybody in.

On the other end of the spectrum, a larger and better-funded library with a well-developed professional development strategy encountered opportunity costs related to staff time, too:

We don't have anybody who necessarily is devoted to any one thing... [It's] a strength of [our library] not to have a great deal of hierarchy to allow people to take on projects, but in terms of competing priorities, where you focus your time, it does mean that you have to decide—make decisions about where you want to focus that staff power.

But in contrast to smaller libraries, the larger library's decision to forgo future web literacy training was based more on strategic decisions. A larger library with an abundance of professional development opportunities and obligations needs to ensure it is offering the right kind of training (with respect to skills taught, training format, platform used, time required, etc.) for the right reasons. Per an interview with the pilot:

We were looking at the amount of time that we have been dedicating to the project up to this point to create the adaptations that we have, and we've been balancing that with other investments... We're just trying to figure out the best way to honor all of our commitments in a way that makes more sense... All the people that we're working with and that we're training also have a lot of conflicting priorities...

Opportunity costs also play out in the case of the UW iSchool, where graduate students have numerous opportunities to pursue coursework and research for credits toward graduation. The UW iSchool pilot had only one MLIS student participant, and although this was largely due to timing challenges with the academic calendar, it is also a reminder that web literacy instruction, as an elective subject, needs to be visible and appealing to emerging library professionals so that those skills can be transferred to public libraries.

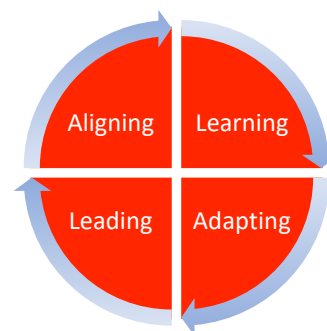
3.3 Pilot experiences

This section summarizes the experiences of the pilot libraries and MLIS program by highlighting key takeaways. It also includes suggestions for addressing the challenges surfaced. Some of the suggestions come directly from the Evaluator, but most are derived from suggestions from the pilots, either directly or indirectly, and are noted as such.

Rather than discuss each activity undertaken during the project (e.g., remixing, posting to Discourse, conducting a training session), the activities have been grouped into four important functions associated with the Digital Skills for Digital Librarians project: learning, adapting, leading, and aligning.

- ❖ **Learning** - The process of learning how to use and teach the web literacy curriculum
- ❖ **Adapting** - The process of selecting, remixing, supplementing, and structuring web literacy resources to develop training plans
- ❖ **Leading** – The process of implementing web literacy trainings
- ❖ **Aligning** - The process of situating web literacy instruction and credentials within existing library practices and culture

Figure 2. Four functions of project activities



3.3.1 Learning

Over the course of the project, the pilots were introduced to the web literacy framework and curriculum, to tools like Thimble and the Open Badges Academy, and to hands-on and participatory training approaches. The learning experience involved frequent communications with Mozilla and all of the pilots to experiment and problem-solve together. Learning activities included:

- Project kickoff meeting held in Chicago (June 7, 2016)
- Project-wide web literacy training held in Cleveland (August 25, 2016)
- Regularly scheduled calls between Mozilla and the pilots, including the community calls
- Online forums, including Discourse and Ethernet
- Ad hoc support from Mozilla

Takeaways

- The pilots found that the Mozilla-led kickoff and training events in June and August 2016 were well managed, informative, interactive, and energizing. However, after the events, some pilots were more eager to jump into the curriculum than others: while one described themselves as ready “*right out of the gate*” another would have preferred more direction, including a clearer sense of project expectations. Additionally, the August training in Cleveland was described as a very full and intense day, perhaps too time-intensive for some.
- The monthly, project-wide community calls were seen as being helpful. Only one library expressed distaste for them. Otherwise, the pilots described how they liked to stay abreast of project developments and what the other pilots were up to. “*It was nice to have those calls and hear those conversations,*” said one library. Even the non-library pilot, the MLIS program (UW iSchool), appreciated how the community calls allowed the pilots to share ideas and implementation strategies. When asked more broadly about

the project's community of practice, the pilots' responses were similarly positive. However, three libraries seemed to regret how they had gained only a superficial understanding of the other pilots' projects. For instance, "What I was getting from the community of practice was just little hints of information here and there on what they're doing within their projects... [I would have liked] having a little bit more in-depth conversation with some of them and getting a little bit more details about what they were doing and some of their successes and challenges." When asked to share something they had learned from the other pilots, few pilots could point to anything specific.

- Although most pilots created and shared at least one remixed lesson, those shared remixes were hardly utilized: only a couple of pilots viewed them, and none found them to inform their own web literacy trainings. This was attributed to two main factors: concurrent remixing, and disorganization. That is, the pilots developed remixes at the same time, such that they had no remixes to draw on early on, when they were in need of them; and at least three pilots were frustrated that remixed activities were not better organized or findable online.

Suggestions

- At future Mozilla-led trainings, consider leaving more time for the pilots to learn about each other and develop personal relationships. Bonds established between participating organizations early in the project could help to increase participation in community calls and Discourse conversations, effectively strengthening the community of practice.
- Also at these trainings, as the participating organizations get to know each other better, consider dedicating time to options for curriculum development. One pilot suggested that a valuable output of the training could be a common framework that helps guide the pilots toward developing their own web literacy curriculums.
- The remixes will need to be stored in one central location. Two pilots considered how that central location should function and be better organized: i.e., as a "portal... that you log in to and you drop in your remixes... each library should have an account (If that would happen, that would make our lives a lot easier)," and:

The sorting through was a little difficult in terms of trying to pick out what you think might be the most applicable. I can see why it would be hard to index [the remixes] but... a little bit more effort around that [would be helpful]. If there are [remixes] focused on privacy, for example, they can call that out and lump them together.

3.3.2 Adapting

Adapting can be understood as the pilots' process of selecting, remixing, supplementing, and structuring web literacy resources they could then develop into training plans that meet their unique needs.

Takeaways

- The pilots agreed that Mozilla has a strong library of curricular materials, expressing excitement about the open, adaptable nature of the learning tools. The pilots also appreciated the flexibility of the web

literacy curriculum. They liked being able to pick and choose activities to suit their local audiences, yet the process for some was more time intensive than anticipated. These pilots wanted to do more upfront to minimize the downstream burden on librarians attempting to introduce the resources into their own work. A desire to scale back was also expressed by another pilot that wished it had *"really focused in on training one or two things really, really well, instead of hopping around so much."*

- The pilots seemed to have a relatively easy time remixing the web literacy resources. Changes were described as "mostly small tweaks" and "adding bits here and there," whether to add in new tools or more interactivity or to make adjustments for smaller group sizes and/or shorter training sessions. One pilot departed from this pattern by creating a dozen remixes related to coding languages.
- Two pilots had considered developing self-directed, asynchronous curriculums in order to be able to train new hires and distant locations but changed their minds early in the project. For one pilot, this was because they felt "the first exposure needs to be in person" to allow for adequate guidance and a safe, responsive environment to learn in. For another pilot, too much work would have been required to transform Mozilla's web literacy materials into a quality asynchronous learning experience:

I definitely think that this could be part of an asynchronous way and still be playful and fun and have that same joy in learning and exploration that the classroom based activities do but they would have to be rewritten completely from the ground up... We were looking at [stripping] them down completely to their basic core form and then... completely rewriting them... that's what I think would have to be done in order to make this successful as an asynchronous curriculum.... There are so many great places online where you can learn... Places like Codecademy, where you go in and it's interactive, it's talking to you, it's working with you and working through things with you. And in order to have like a really useful online curriculum, people expect that level of engagement with their asynchronous activity.

- Early in the project, a few libraries expressed uneasiness with the length of the six-month pilot period because it prevented them from developing the type of polished curricula they were accustomed to producing. However, these concerns did not surface during the second round of interviews, presumably due to a three-month extension period, as well as how the trainers had grown more comfortable with Mozilla's style of experiential learning. By the end of the project these libraries came to recognize the value of being able to tweak their trainings with each iteration. When asked what they would have liked to have done differently during the project, one pilot summed it up as: *"I would just say less time thinking, more time doing."*

Suggestions

- Although the pilots praised Mozilla's hands-on approach to web literacy skills training, the web literacy resources could do a better job of accommodating differences in learning styles. When revising the curriculum, consider providing optional readings before the trainings to aid visual learners and adding additional auditory elements. It is possible that, for some of the individuals who participated in web literacy training but appeared closed off or resistant to learning, some of their frustration might have been rooted in learning style differences. By deliberately accommodating these differences, the trainings could appeal to a greater number of library staff. Consider testing the web literacy curriculum across groups of people to see whether and how learning style differences play out and to identify strategies to

address them. Or consider creating an additional, centralized library to compile the resources the pilots have developed to supplement their trainings (items that were not part of their remixes), items that were not part of their remixes, for sharing and future use. (In addition to supplemental training materials, the library could include pre/post assessment forms, curriculum scaffolding, etc.)

- Consider curating the curriculum, assembling a core package of skills modules that are limited in number and patron-centered, as was suggested by three pilot libraries. When doing so, make the package navigable for frontline staff, so that they can access the module that fits their needs on the spot, while working with a library patron. Doing so might help address concerns about capacity constraints (“so it’s not so taxing on time for librarians to figure it out and piece meal things together,” Providence) as well as issues of perceived relevancy, given that not all training participants could see how they would use web literacy resources on the job. A curated package of materials like this could be particularly helpful in rural libraries, where issues around capacity and applicability appear to be the most pressing:

I think that shifting this overall toward a patron centric set of skills would probably get a lot more traction. People would be much more interested... [And] having a starting place beyond “here’s this (admittedly great) pile of resources,” I think that would have allowed better adaptation, more quality time spent teaching. It would have perhaps given a less one-off feeling to all of it.

This sentiment was not restricted to rural libraries:

How to incorporate this into public programming.... One of the biggest things that I was hearing time and time again, and one of the things that I wanted from Mozilla was to say, “Here is a curriculum. Here’s an activity that is already prepackaged.” And then I could hand it to any staff member and say, “Okay, here. Offer this to a patron,” without having to have them modify something or anything like that.... So we want to create these packages that not only for the staff members that have been trained on this but we’d also like to create these packages and release them to other libraries. So we’re saying, “Okay, maybe you haven’t been trained on Mozilla Web Literacy but by reading this documentation, by going through this, you can offer this to your patrons and learn at the same time.”

This additional point, that a patron-centered curriculum could be designed in a way that allows for library staff to learn web literacy skills *while* working with patrons was mentioned by two libraries including one that had already developed plans to do exactly this while rolling out a coding club statewide.

3.3.3 Leading

Leading involves the process of implementing web literacy trainings. Activities included scheduling and organizing the trainings, recruiting participants (if opt-in), and providing web literacy instruction.

Takeaways

- Nearly all of the pilots’ trainings went as planned, with the results meeting or surpassing their expectations. Pilots reported mostly positive feedback from participants and were largely satisfied with the results of their web literacy trainings. From the perspective of one pilot participant: “So all in all I would say it went over very well and we were very pleased,” and from another: “[The] groups really echoed that the activities were very engaging. They were very informative.”

- However, one pilot received more negative feedback from participants than other pilots which was attributed to a perceived lack of relevancy or applicability to the job responsibilities of library staff (see section on outcomes). Additionally, two pilots mentioned the need to articulate the value of web literacy skills to library staff early on, before training starts, and to think about a “strategy of how to sell this to different segments of the staff.”
- A few pilots were surprised by the low level of digital skills demonstrated by training and expressed some regret that they had not done more to determine the skill level of library staff beforehand or prepared a curriculum that could better accommodate a skill gap (UW iSchool). Additionally, two pilots had not expected to encounter negative attitudes among participants.

Suggestions

- In the future, libraries or MLIS programs may want to provide pre-assessments in advance of trainings to understand participants’ skill-level and attitudes, allowing for time to plan a strategy for training learners with different technical skills, knowledge of web literacy concepts, and attitudes about the relevance of web literacy. Doing so could also provide an opportunity to discern learner outcomes using pre- and post-assessments, as well as provide insight into ways to message the value of web literacy skills before and during the trainings.

[There is an] assumption that the profession is already at the starting place [to be web savvy], which I think has some fundamental flaws that go pretty deep into what we expect the profession to be looking like, versus what it does look like. There are all sorts of reasons [why] it’s really important to be sensitive to that, in the same way that we have to be sensitive to our patrons’ knowledge, we have to be sensitive to the knowledge of the people who are working all over, because we can turn them off if we message them wrong.

- For trainers, other ways to emphasize the relevancy of web literacy training might include (1) measuring changes in participants’ attitudes on the usefulness of web literacy skills and concepts as an (essential) early outcome, and (2) stressing the forward-looking nature and importance of web literacy skills and knowledge; i.e., that web literacy skills will support: (a) current patrons’ current needs, (b) future patrons’ current needs, and (c) the future needs of both groups as the national/global need for web literacy skills continues to expand.

3.3.4 Aligning

Aligning can be seen as the process of situating the web literacy curriculum and Mozilla’s approach to training within existing organizational practices and culture. Although “library culture” is a fuzzy term, it essentially tells us something about the nature or friction (or lack of friction) between a pilot project and its organizational context. For the pilots, alignment connotes some degree of influence from factors outside of and acting independently from web literacy efforts, such as if the library has established policies on professional development.

Takeaways

- When asked how Mozilla’s curriculum and approach to skills training fit within the library’s professional development culture, the range in responses was considerable. For some, Mozilla’s curriculum was on par with established professional development practices, being “*pretty much in line with what we had been*

doing.” For others, the degree of departure from regular practices was much more pronounced. At one end of the spectrum, a pilot described how her library’s trainings were characteristically technical and narrow in scope, as in step-by-step instruction on how to use a new reporting tool. On the other end, a pilot emphasized how their training days were *“more about choice and exploration than... acquiring just a specific set of skills.”*

- Some of the factors that helped smooth adoption of Mozilla’s approach to training included overlap with Mozilla in regard to strategic priorities (e.g., Providence’s commitment to advancing digital literacy), approach to training (e.g., Toledo’s extensive experience with train-the-trainer formats), mindset (e.g., at Anythink, *“willingness to try new things is part of our corporate culture”*), and ambitions to lead new types of trainings across a wider geography.
- Coincidentally or not, it seems that by the end of Phase 1, some of the most committed pilots were libraries that had established (or planned to establish) informal or flexible learning channels for ongoing web literacy efforts. For instance, at one library, a mix of library staff serve as “ambassadors” to help guide their colleagues as they begin exploring web literacy resources. Another library convened a core team of web literacy trained staff from different libraries to meet monthly and in-person, initially just so they could “bounce ideas off of one another.” A third library planned to create a special interest group for staff to remix web literacy materials or get practice with the curriculum before rolling it out more broadly. *“We just sort of fold it into the existing infrastructure overall.”* Lastly, a fourth library is eager to lead a similar group of learners:

[Staff who participated in the trainings] want to be able to spend more time using and investigating the tools... I would like to create that space for them and have... an open lab where we can just say “these two hours on this day ten people will be in the computer lab,” and we’ll all be working in Thimble. “Choose whatever activities you want...” And I will be there as a resource if questions do come up. Because I think if you actually have that time off the floor, you can really explore. If we don’t create the space for them, I just don’t think it will happen. That’s what I see as a first step in Phase 2.

Suggestions

- How can staff who attend web literacy trainings keep learning? One promising approach may be to promote or tap into existing channels for flexible peer learning in the organization. The types of groups described above may support ongoing interest in web literacy and morale by providing help with problem-solving, opportunities for tinkering, or opportunities to exchange fresh ideas.
- To make a sustained impact on the profession, with a view toward long-term professional development, increase engagement with MLIS programs. Their students are future leaders and nimble learners. Graduate coursework, capstone projects, or independent studies with an applied research component can all present opportunities for students to gain experience with web literacy curriculum development and instruction, as would fellowships or other leadership opportunities provided by Mozilla.

3.4 Pilot plans for the future

3.4.1 Phase 2 extension

Although the first phase of the pilot has ended, a second phase has begun and will continue through December 2017. Five of the eight pilots have indicated their intention to participate in the Phase 2 implementation. Some pilots were also expecting to continue conducting the trainings for another year or two after the Digital Skills for Digital Librarians project concluded. The fact that most of the pilots have opted to return for Phase 2 implementation demonstrates their continued enthusiasm for the project. Lessons can also be drawn from the three libraries declining future participation.

The following pilots will participate in the Phase 2 of implementation:

- Cleveland intends to extend training to all staff over the next two years
- Willoughby intends to extend training to all staff
- Providence intends to expand web literacy training through patron programming, including their Rhode Coders program, which may be rolled out across the state
- Toledo intends to extend training to all staff; they also intend to roll out patron programming
- Metro intends to continue to provide training to library staff on a voluntary basis; they also intend to extend their training efforts to other regions of New York State
- The UW iSchool intends to teach a full course on web literacy in Fall 2017 and reach out to MLIS programs at other universities (Note: As described in the addendum to this report, the iSchool did not participate fully in Phase 2)
- A pilot contact person who formerly worked at CLRC will continue his work with Mozilla under their web literacy leaders program and may also work with Metro in the future to expand their training program to other library councils

Pilots that will not participate in Phase 2 include:

- Anythink: Despite having described their experience with the curriculum and training in mostly positive terms, the library is not continuing with Phase 2 of the pilot project due to staffing challenges and competing priorities. (Note: Also, 90 percent of their staff received training in Phase 1)
- Multnomah: Despite the training team's initial interest in providing additional training to library staff and issuing badges, the library is unlikely to continue with the pilot due to lack of demand for training. (Note: As described in the addendum, Multnomah participated in the web literacy leaders program for Phase 2.)
- CLRC: Turnover of leadership and staff makes continuation doubtful. (Note: The contact person for this pilot had left CLRC, and the Evaluators did not speak with others at CLRC to discuss future plans.)

However, Anythink and Multnomah have not ruled out the possibility of using Mozilla's web literacy resources in their future professional development activities:

I think that the web literacy curriculum is so strong in person that in the future... [it] could definitely make a reappearance for staff.

Folks have asked us when we're going to offer the classes again although... we probably won't offer them exactly the same form again. There may be pieces that we pull out of it to use again.

3.4.2 Web literacy badges

As Mozilla moves forward with designing and implementing digital badges, opinions on badges vary considerably across the pilots, and to a higher degree than any other issue with the web literacy project.

Of eight libraries, only two expressed strong interest in pursuing badges, believing badging activities will be doable and valuable. A third proponent involved with the project but no longer affiliated with a library pilot also expressed interest: *"I think it's important that we have a platform to showcase what we know."* These three participants didn't have an opportunity to administer the badges during this first phase of the project and would still like to try. They also liked the current design of the badges.

Two libraries have a wait-and-see attitude. These libraries feel the process of issuing and evaluating badges is still under development, and they want to see how things evolve. They don't entirely understand how badging would work in their setting, but they're also not opposed to it.

Three libraries said they were unlikely to issue badges at their location. The main reasons cited were due to badges' perceived lack of value, both within the library and in the larger professional world. These libraries also thought that badging would be difficult to incorporate into their current professional development practices, due either to library culture or to a lack of tangible incentives. Regarding implementing web literacy badges for staff:

Just the way that it sits now [digital badges are] not connected to what folks do... It would have to be tied to something that's going to provide you with some tangible incentive. So, whether it's something that we've established within our institution... like is this going to help me to get a promotion or is this going to help me to get more money. Obviously if you do something like that then that's a real positive inducement. That would be the way to make it the most successful. Beyond that if you could make it be kind of like bragging rights, that was where we wanted maybe to get people to put it on their e-mail signature or on their internal profile to have people see who could accumulate the most or just to make themselves look more expert, that might get a few people in.

As explained by another pilot, they felt badging would simply not be worth the effort:

To us [digital badges are] just another layer to be added on to the training and for us it serves no useful purpose... We do a lot of training, a lot of development here in the library and we recognize those different trainings in various ways. But to start establishing credentials and badging did not seem appropriate for this particular type of training.

One library had wanted to try badging, but they encountered too much resistance. To them, a successful web literacy badging initiative *"would have to have a lot of promotional oomph behind it."*

We ended up asking our folks if they were interested in going through the steps to earn the badges and they weren't... And then internally we also tried to... sweeten the pot a little bit to make [badging] more attractive... We have an internal network and we asked if we could let folks add it to their profile on our internal network, or if they could add it to their e-mail signature. Both of those ideas were shot down. So we didn't get a lot of cooperation from our own organization in trying to provide incentive to people to earn the badges... Really all [participants] could do was add them to LinkedIn... and no one was interested in doing that.

Finally, the UW Information School pilot does not believe badging would be applicable in a university: *“I think it would be a little difficult to implement, especially being a degree granting institutional department where [we can issue our own] sub-certificates.”* The pilot also implied why they could understand why some libraries might have reservations about badging:

Mozilla clearly has very good understanding of the literature around credentialing. But as a whole, badges are not—there’s some mixed results like when you look empirically at the role that badges play in establishing authority, establishing power, or establishing expertise. I guess my own experience in that literature [colors my perspective].

Looking forward, the pilots provided a range of ideas for how to make badging work better for libraries:

- More structure: more scaffolding would allow badging to stand up on its own, be offered asynchronously
- More play: gamification to make badges more appealing; users should have room to be creative and choose their own experience – e.g., which activities to complete to earn a badge
- Localized: adaptable to address library’s core competency requirements, training goals, or human resources mission
- More examples: more training and resources provided to show how peer libraries (in terms of staff size or number of branches) have implemented badging
- Navigable across different skill-levels: a gradient of instruction, basic enough for beginners, but also allowing resources for users to advance and develop competency
- Pre-assessment: includes a pre-test allowing users to demonstrate their skills to earn a badge (without the need to complete the badging activity)
- Alternative certification methods: consider offering a short skill-based quiz for patrons: e.g., *“[Badging] is not ultra-feasible if you want to teach these skills to low income students [who don’t] have time on a computer at home... or even time on a computer at a library.”*

4 Conclusion

Between June 2016 and March 2017, the Digital Skills for Digital Librarians project piloted web literacy skills training and credentialing in eight public libraries and one LIS graduate program. As a result of web literacy training provided in the libraries, almost 300 library staff gained insights on basic web mechanics and how to contribute and safely share information online. This evaluation sought to answer three questions about the pilots’ experiences with learning, adapting, leading, and aligning the web literacy curriculum. Summarized answers to those questions follow.

- 1 *In what ways have the different pilots taken up the curriculum, making it their own?*

With support and encouragement from Mozilla, the pilots shaped and implemented their web literacy trainings in a variety of ways, with approaches differing in regard to stated objectives, training formats, number and nature of curriculum remixes and adaptations, number and titles of library staff trained, provision of web literacy training for patrons, and ability to leverage institutional peer-learning practices for ongoing skill development. Such customization allowed the libraries to account for differences in local audience, library priorities, and professional development practices. In the variety of approaches used, the pilots demonstrated that the web literacy materials, as well as Mozilla’s approach to instruction, are quite effective and versatile across a variety of public

library environments. One disadvantage to this array of approaches, however, was that most of the pilots saw their own efforts as distinct and different from the other pilots, which contributed to weaker relationships and impeded knowledge sharing across the pilots.

2 *What successes and challenges have the pilots faced while adapting and implementing the web literacy curriculum?*

From the perspective of interviewees, the pilot-led web literacy trainings were largely effective and successful. Early indications of positive outcomes for participants included changes in knowledge, attitudes, and basic skills. Changes in behaviors were too early to detect, although roughly half of the pilots reported that staff participants expressed an interest in using their new skills with patrons. The most encouraging training results appeared to accrue to library staff with (1) sufficient digital literacy skills to meaningfully participate in the training, (2) limited exposure to the “write” and “participate” skills and competences, (3) comfort participating in Mozilla’s style of experiential learning, (4) an understanding of how web literacy skills can be used at work, and (5) a library culture that prioritizes professional development and/or staff’s learning endeavors despite capacity constraints. Positive outcomes also included early indications of potential organizational changes, such as trainers expressing an interest in incorporating Mozilla’s style of interactive trainings into other professional development activities.

The most notable project challenges involved the development and implementation of web literacy badges. The pilots had expected the badges to be ready for testing in fall 2016, but found that even by the end of the project’s first implementation phase, in March 2017, the badges were not entirely ready to be rolled out. (Note: the pilots that continue their work with Mozilla during the second implementation phase will have an opportunity to implement web literacy badges with library staff and/or library patrons.) The program was also hindered by the project’s misalignment with the University of Washington’s academic calendar, such that the UW iSchool was unable to offer a course in web literacy and had difficulty marketing an opportunity for independent study to MLIS students. In regard to challenges encountered by the pilots while offering web literacy training, it was clear that the successes of a few libraries were hampered by a perceived lack of relevancy for library professionals. This issue was most apparent at one pilot library where training participants provided negative feedback, indicating they did not anticipate future opportunities to use the web literacy resources with their patrons.

3 *What are possible pathways for scaling and sustaining the web literacy curriculum?*

Given feedback from the interviewees, promising approaches for sustaining the web literacy curriculum could involve, at the local level, avenues through which web literacy training participants can continue practicing and expanding their skills, both to reinforce ongoing web literacy skill development among those who have already participated in web literacy training and to provide enthusiasm and support for future web literacy training at the library, whether staff-facing or patron-facing (e.g., as through Mozilla Clubs). Public libraries can do this by creating or leveraging flexible peer learning structures in the organization, like those implemented in Cleveland (i.e., the ambassador program), Providence (i.e., the monthly meetup), and Metro (i.e., special interest groups).

On a national level, scale could be bolstered by strengthening the relationships between all participating libraries and MLIS programs. Relationships that develop into self-perpetuating communities can be capitalized on to facilitate problem-solving, knowledge-sharing, and build continuous momentum. Opportunities for expanded relationships could involve a convening of libraries, a competition or challenge libraries and graduate students can take part in, Mozilla’s digital leaders program, etc. Furthermore, partnerships with national library associations, state libraries, or library support organizations may prove critical for gaining buy-in from a wider segment of

libraries, increasing the perceived relevance of web literacy, and ensuring the value of web literacy badges. However, at the local level, designing web literacy resources and curricula that appeal to a broader base of library staff (e.g., those with lower digital literacy skills, those with more developed web literacy skills), or specializing materials based on the needs of different audiences (e.g., learning styles, rural users, remote or asynchronous users) could be important next step.

5 Addendum: Phase 2 extension

5.1 Background

This addendum documents developments in the Digital Skills for Digital Librarians project occurring after March 2017, which marked the end of the first phase of the project and the first publication of this report. The timeframe covered here includes the project's Phase 2 Extension (April 2017 to December 2017) and conversations between the pilots to the present date.

For the purposes of this addendum, the "Phase 2 Extension" refers to two programs undertaken concurrently by the Mozilla Foundation during this time period: project extensions of the web literacy trainings from Phase 1 and the Web Literacy Leaders program.¹⁴ "Pilots" refers to the libraries that participated in either program. "Program participants" refers to multiple levels of participants: the leaders responsible for the pilot at each library (including all interview respondents, a.k.a., "project leaders"), library staff trained during Phase 1 that went on to train other library staff (a.k.a., "staff trainers"), and library staff trained during Phase 1 or Phase 2 ("training participants").

Researchers from the Information School at the University of Washington continued their role in Phase 2 to answer three questions posed by the Mozilla Foundation:

1. What have the project's participants learned?
2. How has this experience supported participants' professional growth?
3. Why do participants believe web literacy training is important for their constituents/community?

To answer these questions, the researchers conducted one semi-structured phone interview with each of the six pilots in November 2017. Each interview lasted approximately 30 minutes, featured one or two respondents, was audio recorded, transcribed, and analyzed for cross-cutting themes. The results presented here also draw from secondary data, including notes from monthly community calls, the pilots' posts on Medium, and the results of an online survey conducted by Mozilla on perceptions of web literacy badges.

The interview respondents represented six libraries, all of which had been pilots during Phase 1. At the end of Phase 1, the pilots were asked what types of projects they would like to pursue, both in their own libraries and in small teams with other pilots. Given their varying objectives, some pilots opted to continue their web literacy work from Phase 1, some opted to participate in the Web Literacy Leaders program, and others opted to do both. (See Figure 1 below.)

¹⁴ "Mozilla's Web Literacy Leaders Program is a six-month, cohort-based program designed to build a cadre of learners, teachers, and leaders who become advocates of an open and healthy internet by teaching others core web literacy skills. The cohort will participate in Mozilla-led web literacy trainings and train-the-trainer sessions, deliver training to others, learn to work in the open, participate in the larger Mozilla community, and become web literacy leaders in their professional fields and communities." From: Chung, A. (June 2017). "Introducing Mozilla's Web Literacy Leaders." *Medium*. Available at: <https://medium.com/read-write-participate/introducing-mozillas-web-literacy-leaders-c7f230d0e4dd>

Figure 3. Pilots and their Phase 2 involvement

Pilot Libraries	Phase 2 Grantees	Web Literacy Leaders
Cleveland Public Library	x	x
Metropolitan New York Library Council (METRO)	x	x
Multnomah Public Library		x
Providence Public Library	x	x
Toledo-Lucas County Public Library	x	
Willoughby-Eastlake Public Library	x	

5.2 Phase 2 activities

At the outset of the project, each of Phase 2 pilots outlined its goals for web literacy training, curriculum development, web literacy badges, and other activities. Those goals are summarized in Figure 2.

Figure 4. Phase 2 Project Goals

Pilot Site	Description of Project Extension Goals
Cleveland Public Library	<p>Training: Expand Web Literacy training to more staff members.</p> <p>Curriculum: Remix existing web literacy learning activities into library-specific turnkey packages.</p> <p>Badges: Plan to offer optional badges to staff members after they undergo web literacy training. (An estimated 200-300 people out of a total 500 staff required to attend Web Literacy training will earn badges.)</p> <p>Other: Build communities of practice amongst trained users to test and remix or give feedback on newly developed activities.</p>
Metropolitan New York Library Council (METRO)	<p>Curriculum: Interface directly with the local community to create remixes appropriate for the library audience; initial pilot participants will be part of a Web Literacy special interest group and remix additional activities/practice facilitating in a supportive environment.</p> <p>Training: Training will be adjusted from a train-the-trainer model to an inclusive format, addressing librarians who are engaging for their own professional development (including librarians who do not currently have a teaching responsibility.) Conduct two separate runs of three workshops which will train an estimated 60 additional library workers. Trainings will focus on specific subjects rather than attempt to touch on each and every web literacy skill from the Mozilla Web Literacy Map.</p> <p>Badges: Plan to offer badges for most of their professional development workshops and estimate that ~ 30 people will apply for badges during the pilot.</p>
Multnomah Public Library	<p>Other: Create a cohort of about ten staff, selected from the group of 30 staff trained during Phase 1; lead the group through a Design Thinking process where they will each create and implement one or more resources to share with other staff, volunteers, and/or patrons; present training and resources, facilitate discussion and brainstorm new, productive, and continuous ways to share information with colleagues and patrons.</p>
Providence Public Library	<p>Curriculum: 1) Create remixes for the Rhode Coders Club to be used as a turnkey curriculum for coding classes at other libraries; 2) Develop activities that build a sub-set of skills and competencies for -coding; privacy and protection; and evaluation of web resources.</p> <p>Training: Increase capacity to offer "Rhode Coders Clubs" in the state through a train-the-trainers program which will expand program to two to three additional libraries.</p> <p>Badges: Plan to offer badges to an estimated 20 people composed of staff, patron or educators (including at other libraries as coding clubs roll out) who undergo web literacy training.</p>

Toledo Lucas County Public Library	<p>Curriculum: Web Literacy trainers have made some modifications to the web literacy classes - providing additional information, allowing more participant interaction, and utilizing headphones for participants.</p> <p>Training: All staff will be required to attend a two-hour "Intro to Web Literacy" training session. Staff with programming responsibilities required to attend the entire Web Literacy training series, divided into three modules (six and half hours total training).</p> <p>Badges: Stated in survey that they would like to use badging for leader's program pilot project for schools, however are willing to test for staff as well.</p> <p>Other: Seeking to continue to improve library staff's knowledge in 21st Century Web Literacy skills and increase their module one class size to allow more staff to attend the meetings.</p>
Willoughby-Eastlake Public Library	<p>Curriculum: Remix and extend to young adult, child and adult patrons.</p> <p>Training: Young adult: students at the Grant School Summer Camps will complete web literacy activities; Adult: two new summer courses - "Privacy Matters" and a two-part "Build the Web" series (part of summer reading program). Staff: plan to host "open thimble labs" for staff (with a Web Literacy expert available) to explore full range of Web Literacy activities</p> <p>Badges: Plan to offer badges to staff based on activities completed during the open lab sessions</p>

5.3 Results

Our analysis of interview data revealed common themes that emerged during discussions with the pilots. Those themes are presented below, structured by the three evaluation questions of this addendum.

What have the project’s participants learned?

When asked what they had learned while implementing their projects, the respondents spoke of challenges they had faced and their responses to those challenges. The data revealed that, most notably:

- Project leaders identified, navigated, and problem-solved logistical challenges.
- Project leaders learned how critical staff buy-in is to the success of their efforts.

Project leaders identified, navigated, and problem-solved logistical challenges.

For Phase 2, respondents described only a few logistical challenges during the interviews, most of which centered on human resource issues: scheduling staff time, trainer fatigue, and a shortage of trainers.

Scheduling staff time. In contrast to Phase 1, only one library [Multnomah] noted the difficulty of scheduling web literacy activities so that staff could attend without disrupting library services. This suggests that over the course of the project, the pilots identified ways to offer web literacy trainings with schedules that worked for their organizations, such as by changing the length or format of training sessions, or to schedule the activities far in advance.

Trainer fatigue. One respondent described a challenge with the library’s train-the-trainer model: overextending the 20 staff who were needed to lead trainings across their large library system [Toledo]. After investigating the issue, the library began pursuing several corrections to ease the burden on trainers: restructuring how trainers are designated to cover particular trainings, having other staff set up the training room equipment in advance, and also possibly bringing in staff from the technical services department to assist with the trainings. On the last point:

If we can get some non-public service table wranglers, that will help too. The hard thing is getting people that would be comfortable doing the training. So a halfway point was [asking], “if we can minimize the amount of actual trainer speaking that we need, could we have other people there to help with general

technology issues?” We have several non-public departments. I think we’re really looking at the technical services department to find a few people that would be interested in helping out. [Toledo]

Shortage of trainers. At one library, the rollout of web literacy trainings to all library staff was postponed by four months due to delays of the larger staff training program, of which it was a part [Cleveland]. With only a limited number of instructors available, the organization began weighing which training components to prioritize: *“What is more important? Is web literacy more important?”* Given these delays, the respondents turned their attention to implementing web literacy badges and addressing the issues that arose there, such as the very low number of people submitting badges.

Project leaders learned how critical staff buy-in is to the success of their efforts.

During Phase 1, low demand for training and questions about its relevance emerged as major challenges for a few pilots. Two of those pilots participated in the Phase 2 Extension and were the most vocal during the interviews about a critical need for more staff buy-in when designing and implementing web literacy activities.

Results from the interviews suggest that web literacy leaders found success when they avoided introducing the web literacy curriculum as a top-down initiative into their library context and instead enabled a core group of librarians to work with and make the curriculum their own. Three strategies emerged for increasing buy-in and a sense of ownership amongst library staff.

Incentivizing meaningful feedback. One respondent discussed possible approaches for “getting buy-in from the ground up,” such as informal events where staff could try out the badges and provide feedback on how to make them valuable.

We wanted to start experimenting and providing an incentive for people to get these badges. [For example,] anybody, who either attempted or completed a badge, would be invited for kind of a closing party.... We wanted them to actually go through it so that they knew how much time it was so they knew how intense it was, and then ask them, “Okay, what would make you continue to do this in the future? Why should we do badging as an organization?” [Cleveland]

Having front-line staff take the lead. For a library that had initially planned not to continue its web literacy work during Phase 2, due largely to low interest from staff, the project leaders in Phase 2 decided to organize their project such that front-line staff could lead the effort, pursuing web literacy activities of their own choosing. The process of bringing the staff together to decide their next steps forward included a Design Thinking activity, in which staff were asked to picture a library patron or staff member in need of assistance and what their specific needs might be.

We really wanted to really extend the idea of open leadership that Mozilla [encourages]. And [our library had also talked about] the idea of having more decisions being made “from below.” And so, [we wanted] to find an opportunity to get front-line staff designing, learning for other staff and for library patrons. [They may also have] a better sense of what the needs are and how to address them, hopefully, quicker. That was the goal. [Multnomah]

Taking an organizational perspective. The team of front-line staff described above decided to start their project by looking more broadly at the library system to identify who might have a vested interest in supporting web literacy opportunities.

They are in the process of trying to figure out what is already being done in the system. And in a library this big, we find that a lot of people have created a lot of great things and it doesn’t always get communicated to everyone. And so, they’re starting to contact the various departments, the staff, people

who do public training. Some of volunteer services staff have designed something really great on privacy for school-age kids. Feeling out all of this stuff and figuring out what's already out there. How can we use what's already there? Who are our stakeholders? And then how can we work from there and also with Mozilla's materials. [Multnomah]

Takeaways

Overall, the logistical impediments encountered in Phase 2 appeared to be much less substantial than those faced in Phase 1. This suggests that the timeframe of the Phase 2 Extension provided the pilots with sufficient time to problem-solve, implement solutions, and wait out the delays that arose during Phase 1.

For example, two pilots addressed an issue they had encountered in Phase 1 – low staff turnout for web literacy training – with strategies (implemented or not) to make their projects more participatory going forward. Another pilot was in the process of introducing new practices to mitigate the burden placed on staff trainers.

For issues that could not be resolved, one respondent had to remember to keep perspective and appreciate the substantial amount of time that staff had contributed to the web literacy project, both as trainers and as trainees.

I think what we have learned the most is maybe the torque that training can put on staff, not just the trainers but also the people attending, and to have very realistic expectations of how fast things can move, and that this is not the primary job responsibility of them. And so, anything that they are able to do, be appreciative of that and make sure that we're accurately displaying how appreciative we are of both the trainers and the staff. [Toledo]

Additionally, Mozilla seems to have attended to many of the logistical problems encountered during Phase 1. In contrast with interviews conducted during Phase 1, the Phase 2 interview respondents rarely mentioned Mozilla's actions or inactions as impeding or delaying their pilots in any way. Mozilla took action on a wide range of activities in Phase 2, including making technical improvements to the badges platform, organizing web literacy leaders to develop scaffolding for the web literacy curriculum, and having conversations with library associations about web literacy badges. One respondent also commented on Mozilla's responsiveness to her concerns:

I've been impressed by Mozilla's reaction to the commentary that we had from Phase 1 and early Phase 2. For example, in the web literacy leaders' group, there's a small committee that's helping [to] look at the curriculum and figure out how to update it so that it's more seamless, so that there are content pieces available to us as well, so that when we talk about HTML, there's actually written instruction on how to open up a text document, how to write code in front of people and how to open it up locally in your machine, which is something that we had done on our own for the workshops that we ran in Phase 1. [METRO]

How has this experience supported participants' professional growth?

When discussing how the web literacy program had supported professional growth among participants at their libraries, interview respondents highlighted changes they had observed among program leaders, training participants, and, most noticeably, staff who were trained to become trainers. Participants demonstrated professional growth in the following ways:

- Training participants demonstrated new skills and attitudes.
- Project leaders and staff trainers grew more confident and stepped into new roles.
- Project leaders benefited from opportunities to share and connect across pilots.

Training participants demonstrated new skills and attitudes

Respondents reported seeing changes among staff who had participated in web literacy trainings.

Developing ideas for updating programs. One respondent reported observing staff incorporating web literacy skills and concepts into their programs: “We’ve had staff members say, ‘Oh, I didn’t realize this was important to teach. It’s part of web literacy.’ And so, they go and take some of these topics back and start incorporating them into traditional programming” [Cleveland].

Developing soft skills. The same respondent also believed the web literacy training helped instill the soft skills that are very much needed when working with library patrons. He had observed this when conducting interviews for internal hires, finding staff who had completed the web literacy training had more thoughtful answers to scenario-based questions, such as helping an individual apply for a job online who has never used a computer before [Cleveland].

Creating opportunities for more reserved, less tech-savvy staff. At one library, staff training was seen as particularly beneficial for individuals who were perhaps less likely to pursue similar opportunities.

This does a little bit of hand holding for those people that might be a little bit more reserved. That’s why I think we get so many positive reviews. It’s almost like, yes, it’s a required training but it’s a relevant required training that they can see a practical application with. [Toledo]

Project leaders and staff trainers grew more confident and stepped into new roles

Several respondents commented on the confidence staff exuded after developing stronger leadership and presentation skills.

New roles for project leaders. One respondent, a library director, said that one of the most valuable aspects of participating in the web literacy program has been seeing the project leader demonstrate her strengths and get a promotion due to her strong performance on this project, as well as others [METRO].

Another respondent found she had strengthened her advocacy skills after spending months promoting web literacy throughout the different levels of her organization. “I’m getting a lot better at that kind of elevator pitch: ‘This is why this matters and why I think it will mean something to you’” [Multnomah].

Increased confidence for staff trainers. According to multiple respondents, the librarians trained as trainers felt empowered to go beyond their job description and build new skills. New opportunities are particularly valuable to staff, according to some respondents, because opportunities for professional advancement and leadership are rare in their library systems. For example:

I think it gives them a lot of value and gratification when they’re getting those great reviews back. And also... this is giving those trainers a platform to exercise new skills, to test them, because we’re encouraging more and more staff to do outreach and to go out into the community. This is a nice safe place where they can get that practice because it’s not easy for everybody to stand up in front of an audience and give even just like a predefined presentation, especially one that involves technology and so many different variables. [Toledo]

Furthermore, the same respondent felt the increased confidence spilled over into other areas of staff trainers’ job performance.

There are a lot of people that have never done training before that are now very comfortable. And you can kind of see that their level of comfort in other aspects of their work, so not necessarily just training but

speaking up maybe more in meetings, not being afraid to pick up the phone and make a phone call if they see something that they think could be improved. I've definitely appreciated that aspect of it. That it's not just solely empowerment around training. [Toledo]

Developing leadership skills of front-line staff. At one library, where front-line staff had taken the lead on implementing a web literacy project, a respondent viewed the experience as empowering for those staff.

I think one thing that's working well... is giving them the power to make decisions that in such a large organization like ours, often times the line staff are not the decision makers. ... It has been able to give them the support that they need to get to explore and kind of stretch their own leadership muscles in a way that they might not get to in their day-to-day jobs. [Multnomah]

Project leaders benefited from opportunities to share and connect across pilots

Respondents appreciated having the opportunity to share ideas with other project leaders. One Phase 2 grantee described how it was helpful to have another similarly-sized library system in the group to talk to, that was facing similar obstacles with implementation, in part because *"It makes you feel like you're not falling way behind in the progress of implementing web literacy"* [Toledo].

At another library, the project leaders spoke about feeling a sense of connection to other project leaders -- that *"this is a group that we are part of"* -- and how they benefited from the insights shared: *"Every time I start talking to these people I came back like smarter and more invigorated and with better ideas"* [Multnomah]. One also juxtaposed the open sharing of ideas that took place during community calls and other meetings with the relatively "siloed" nature of her library system, and said the experience had provoked her to reflect on how to work across departments within her own organization [Multnomah].

Takeaways

Overall, these examples from the respondents suggest web literacy activities have supported participants' professional development.

As reported by respondents, after participating in web literacy training, staff have developed new ideas for their programs, improved their soft skills, and gained the confidence and technical knowledge needed to better support patrons. Librarians who were trained as trainers were said to have gained confidence, as well as opportunities to strengthen their leadership skills, in ways that could conceivably support career advancement. These participation outcomes align with the positive effects reported previously in this report (see section 3.2.1.1). Meanwhile, the negative participant effect discussed in Phase 1 (i.e., questions of perceived relevancy) did not resurface during the Phase 2 interviews.

Respondents also indicated that project leaders may have benefitted from their involvement in Phase 1 and Phase 2 of the Digital Skill for Digital Librarians program, both in terms of new ideas that took shape and in the visibility they gained within their organizations for the success of their projects.

Why do participants believe web literacy training is important for their constituents/community?

Interview respondents agreed that web literacy training for librarians supports the broader community. They usually spoke about the benefits to the public in two ways:

- Patrons can expect to receive better service from staff.
- Patrons can gain a clearer understanding of current events and safe uses of technology.

Meanwhile, the respondents' experiences with web literacy badges revealed obstacles that would need to be resolved before the potential benefits of badging could be realized in the library context.

Web literacy training

From the view of respondents, individuals are visiting the library looking for guidance on topics across the web literacy curriculum. Staff who have been trained can provide more responsive services for patrons, whether patrons need help completing basic tasks online, seek a deeper understanding of pressing issues, or want to explore a range of learning resources and expand their skills. Specifically, respondents focused on two types of benefits for patrons.

Patrons can expect better service from library staff. Respondents expect that staff who are equipped with the knowledge, resources, and soft skills web literacy training provides will be better able to assist patrons with day-to-day activities.

The staff are very, I think, enthusiastic about it especially that first training because it's very relevant to their work that they're currently doing. We're constantly helping people sign up for accounts, whether it's email, or their billing, or just helping them log in to different websites. And so, it builds a level of comfort there that they've gone through this kind of thing before. [Toledo]

They can also lift the hood for participants looking to understand the dynamics of the web, whether through training sessions or informal learning such as after-school programs.

We've been kind of scratching the surface of using the internet for so long. I think that helping [staff] see that there's a lot more that we could be doing and kind of shifting from being consumers to creators is where the interest is. [Providence]

Patrons can gain a clearer understanding of current events and safe uses of technology. In four of the six interviews, respondents discussed the currently high demand for instruction on online security and privacy [Toledo, Providence, Multnomah, and Metro].

I think that for library patrons, I think it helps them to feel kind of empowered when there's a lot of fear about security and privacy right now. I think offering some training around it and letting them feel like they have a little bit of control. Like, first of all, they kind of know what things that they should be doing and not doing, and then giving them some kind of some action steps. [Providence]

Other of-the-moment topics include fake news and learning to code. The ability of libraries to meet the shifting demands of patrons can be met due to the adaptability and modular form of the web literacy curriculum. In fact, two pilots discussed "breaking" the format of the curriculum so that they can quickly tailor specific topics as the need arises, which could also help drive demand for training [METRO, Multnomah].

I'm going to anticipate [that in one year] we won't be calling it web literacy anymore, that it'll be broken ... into the different elements of internet health, as they're calling it now.... I think we're finding, whether it's fake news or privacy, that the individual components of web literacy might be the better way of marketing it to the users. [METRO]

Web literacy badges

Respondents were less sure about the added value of web literacy badges, primarily because they felt library staff would not put in the work required to complete badges until the badges have more currency. However, after considering the obstacles Mozilla faces with institutionalizing badges and the obstacles libraries may face

integrating badges into their current practices, respondents themselves were seeing the advantages of incorporating badges into their own web literacy training programs.

Obstacles to implementing badges

The dominant hindrances to badge adoption noted by respondents were:

Credibility. In order for badges to mean something, they will need to be recognized and endorsed officially by PLA, ALA, and/or the state, most respondents agreed. Corporate entities, like LinkedIn, could also help to assign value to web literacy badges.

Until badges have some sort of like authority behind them or some sort of body that's actually looking to see that these are things people are collecting. Until then, it's sort of a moot point, really, whether or not people are earning badges. [METRO]

Difficulty obtaining buy-in. Library staff are unlikely to have much interest in pursuing web literacy badges if badges do not carry some sort of official weight.

If [obtaining badges] is optional, it just isn't going to happen, only because people are really stretched on time and there are a lot of competing priorities. We would have to sort of make it like... they're a requirement, really. For me, I guess, I don't want to make it a requirement at this point because that kind of takes the fun out of it. [Willoughby-Eastlake]

Similarly, the library administration is unlikely to fund future badging activities without a clear answer to the value they would provide.

I still think there's a lot of questions from the [library] administration on how valuable badging is actually going to be and if it is possible to incorporate or to add value to the badges through modification of these HR processes. Honestly, my completely open sense is that there's not a whole lot of optimism with badging, at least where we stand right now. I think there's a lot of desire to see what badging can do but there's also this kind of-- I'm not sure they're going to be willing to invest a lot of resources for starting up our own badging platform in order to continue and experiment. But I'm not sure, we haven't come to that conclusion one way or the other. [Cleveland]

Difficulty integrating badges into existing systems and practices. From the perspective of one respondent, as public institutions, badges would have to clear multiple administrative hurdles in libraries before they could be put to use in a meaningful way.

One of our biggest challenges, I think, is because we're a unionized environment... we had a lot of concerns that we wanted to do badging. We wanted to have people go through this and get "badged," or certified, or something but we couldn't require it because that would basically-- it amounts to testing our employees because we're asking them to do something and then we're going to evaluate their work. And so, there was a lot of concern about that. And also, with that, if we're going to be using badging in the hiring process, or in the promotions process, that we really have to revamp the way we do those. I think a lot of our challenges kind of surrounded the human resource procedures and policies and kind of customs that the organization has in place. And I think if we can change those and provide more weight on that, it would be much more worth it. [Cleveland]

Opportunities for implementing badges

Respondents agreed that under the right conditions -- where badges had value within and beyond their organization -- badges could be adopted as an effective way to evaluate and identify a librarian's specific skill set.

As an instructor... I thought it was really interesting to actually be able to see evidence.... Normally... in a staff training setting, we just kind of assumed they attended the session, like somehow, they must have received all the information. We just sort of pretend that everyone is now up to speed where that is probably not the case. [Willoughby-Eastlake]

Say, [if] I was in HR at the Brooklyn Public Library and I was able to look and see that indeed these candidates that I might be hiring have got some real chops in terms of privacy, or information quality assessment, or something like that, then that's super valuable. I mean, that could be great. [METRO]

One respondent noted that badges would be particularly valuable in the hiring process for their ability to represent candidates' soft skills.

One of the things with the Mozilla Web Literacy project and training is it's a lot of soft skills. And so, it's very hard to say that, "Oh, yes, this person knows about all 14 web literacy skills." Or, they know about coding and reviewing. I think the badging component really added the weight of, for me as a manager, confirming that the staff member knows or grasps those concepts. I, as a hiring manager, would love the ability to have somebody come in and say, "Okay, I have nine badges out of fourteen" and I can see where their skills are and where they have grasped those concepts.... I think there's a lot of value in that. [CLEVELAND]

One respondent sees badges as "the only way" to blend formal and informal education.

Well, I think that it's really the only available mechanism to blend informal and formal education. There has to be some type of credentialing. It's just the current system that we have. The credentialing is largely done at higher-ed through degrees. To me, I would love it if badging microcredentialing became as accepted as an associate's degree or a certificate from a two- or four-year school. I don't know of any other mechanism that would allow the informal world to get that kind of recognition as a bridge. [Providence]

Another respondent liked having badges as an activity at the end of training sessions. It provided an opportunity for reflection on learning when trainees pull together evidence to earn a badge.

I like to build reflection time into my programming anyway. And so, the badging is basically an online version of what I naturally do which is find time for people to write something or have some piece where they are quiet and thinking which certain learners tend to prefer and need that time to reflect back. The badges take that place. [METRO]

5.4 Conclusion

By the end of the Phase 2 Extension, over a period of 19 months, project leaders at six libraries learned and adapted the web literacy curriculum, led trainings, and introduced web literacy concepts and instructional practices within their distinctive organizational cultures, while serving as advocates for web literacy within and outside of their organizations. The project leaders also engaged with Mozilla and each other to contribute improvements to the web literacy curriculum and badges. In the process, the pilots advanced the 14 web literacy skills in the Mozilla Web Literacy Framework while also exhibiting the 21st century skills mapped on to the framework: problem-solving, communication, creativity, and collaboration. Overall, the pilots seemed to conclude Phase 2 with general enthusiasm for web literacy and few of the lingering concerns that developed during Phase 1.

We spoke with project leaders in Phase 2 to find answers to the questions posed by Mozilla for this addendum, specifically:

1. What have the project's participants learned?
2. How has this experience supported participants' professional growth?
3. Why do participants believe web literacy training is important for their constituents/community?

The themes we identified from the interviews, as presented in this addendum, paint a picture of how the public libraries changed during the project. I.e.,

- *Project leaders identified, navigated, and problem-solved logistical challenges.*
- *Project leaders learned how critical staff buy-in is to the success of their efforts.*
- *Training participants demonstrated new skills and attitudes.*
- *Project leaders and staff trainers grew more confident and stepped into new roles.*
- *Project leaders benefited from opportunities to share and connect across pilots.*
- *Patrons can expect to receive better service from staff.*
- *Patrons can gain a clearer understanding of current events and safe uses of technology.*

These themes were derived from conversations with a small sample of individuals who were heavily vested in the success of their projects, and so we cannot ascertain how representative they are of more wide-scale participant outcomes for staff.

However, these themes do suggest that libraries can be good partners for organizations looking to support community education initiatives, and that professionals such as librarians benefit from training opportunities that strengthen 21st century skills (such as problem-solving and collaboration) along with technical knowledge.

6 Annexes

Annex 1. Summary of the pilots and their results

Pilot organization	Project results
<p>Anythink Libraries</p> <ul style="list-style-type: none"> - Adams County, Colorado (outside of Denver) - Consists of 6 suburban branch libraries and 1 rural branch library - Annual revenue of \$13-\$14 million - Employs a 113 staff, of which 21% hold an MLS degree - The libraries serve a population of 360,000 with 14% living below the federal poverty level 	<p>Anythink initially planned to train 12 staff members and adapt the Mozilla curriculum for asynchronous learning opportunities for staff, but the plan changed when the implementation team was invited to lead the annual Tech Fest using the Mozilla curriculum as a template to encourage staff learning and exploration. An estimated 130-140 library staff participated in the web literacy training.</p>
<p>Cleveland Public Library</p> <ul style="list-style-type: none"> - In Cleveland, Ohio - Consists of 1 urban central library and 28 urban branch libraries - Annual revenue of \$55 million - Employs a total of 536 staff, of which 22% hold an MLS degree - The libraries serve a population of 398,000 with 36% living below the federal poverty level 	<p>Cleveland trained an initial group of 40 library staff to function as “ambassadors” across each library branch, providing guidance and support to staff who would later participate in web literacy training. Cleveland’s long-term goal was to have all patron-facing staff complete web literacy trainings.</p> <p>Cleveland also invited 2 staff from Willoughby-Eastlake to be trained as ambassadors.</p>
<p>Willoughby-Eastlake Public Library</p> <ul style="list-style-type: none"> - In Lake County, Ohio (30-minute drive from Cleveland) - Consists of 3 suburban branch libraries and one rural branch library - Annual revenue of \$5 million - Employs 63 staff, of which 24% hold an MLS degree - The libraries serve a population of 65,000 with 8% living below the federal poverty level 	<p>Willoughby was included in this project under Cleveland’s pilot, and as such did not submit a proposal or work plan.</p> <p>The initial plan was for Cleveland to train 2 staff from Willoughby-Eastlake so that they could provide informal training to staff on an as needed basis, but by March 2017, Willoughby had trained 18 staff from four branches and had plans to extend training to all public-facing staff.</p>
<p>Multnomah Public Library</p> <ul style="list-style-type: none"> - In Multnomah County, Oregon (located in and around Portland) - Consists of 1 urban central library, 14 urban branches, and 4 suburban branches - Annual revenue of \$67 million - Employs a total of 515 staff, of which 15% hold an MLS degree - The libraries serve a population of 757,000 with 19% living below the federal poverty level 	<p>Multnomah provided web literacy training to 30 staff members with web literacy training including public service staff. The web literacy curriculum was broken out into three parts: introduction to web mechanics, privacy and protection, and participatory coding topics.</p>

<p><i>Providence Public Library</i></p> <ul style="list-style-type: none"> - In Providence, Rhode Island - Consists of one central urban library - Annual revenue of \$4 million - Employs 35 staff, of which 26% hold an MLS degree - The library serves a population of 178,000 with 29% living below the federal poverty level 	<p>Providence worked with four additional library systems on this pilot. Providence focused on training library staff who could then integrate the Mozilla curriculum into existing patron programming, including Rhode Coders club and Teen Squad activities, focused on teens and adults, with some library staff participating as well.</p> <p>Providence led monthly meetings with new web literacy trainers to provide status updates, exchange ideas, and brainstorm with one another.</p>
<p><i>Toledo Lucas County Public Library</i></p> <ul style="list-style-type: none"> - In Lucas County, Ohio (located in and around Toledo) - Consists of 1 urban central library, 13 urban branches, and 5 suburban branches - Annual revenue of \$35 million - Employs 309 staff, of which 28% hold an MLS degree T - The libraries serve a population of 442,000 with 21% living below the federal poverty level 	<p>Toledo trained 20 library staff to become core trainers who will, in turn, train other library staff in web literacy skills, with the goal of training all staff in at least the introductory module. Those trainings are planned to occur during Phase 2 of the pilot.</p> <p>Toledo broke down the materials into three modules: introduction to web literacy, intermediate web literacy skills, and advanced web literacy skills.</p>
<p><i>Central New York Library Resource Council</i></p> <ul style="list-style-type: none"> - Is one of nine Reference and Research Library Resources Councils in New York State - Serves libraries and library systems in four mostly suburban and rural Central New York counties: Herkimer, Madison, Oneida, and Onondaga 	<p>CLRC provided in on-site trainings to 12 or so staff at four rural libraries, as well as training to just a few people at a central library. Curriculum was divided into three parts: Read, Write, and Participate.</p>
<p><i>Metropolitan New York Library Council</i></p> <ul style="list-style-type: none"> - Is one of nine Reference and Research Library Resources Councils in New York State - Serves mostly urban and suburban libraries and library systems in New York City and Westchester County 	<p>METRO trained 20 library staff through two sets of three trainings. Curriculum was divided into three parts: Read, Write, or Participate. Of those who completed the trainings, individuals were identified to lead an ongoing web literacy Special Interest Group (SIG).</p>
<p><i>University of Washington Information School</i></p> <ul style="list-style-type: none"> - Is located in Seattle, Washington - Master of Library and Information Science program - The program had 119 residential and 210 distance learning students enrolled in Autumn 2016 	<p>The iSchool planned to offer a class in Fall quarter 2016 for students focusing on public libraries to explore web literacy concepts and adapt curriculum to specific audiences. Due to scheduling conflicts, only one student enrolled in the independent study course. The curriculum is divided into three modules: Read, Write, and Participated. For the pilot, the student worked through the syllabus that was developed for the course, working through the Mozilla curriculum and supplementing activities with topical readings.</p>

Annex 2. Three new web literacy user personas and narratives

Developed by Ligaya Scaff, Rose Strickman, and Swathi Sagi

As part of a research seminar offered by TASCHA at the UW iSchool, three graduate students analyzed project data to create three personas and narratives. The new personas were the result of a ten-week process comprised of getting familiar with the web literacy resources, transcribing audio files from the first round of interviews, coding the transcripts to discover major themes related to the project’s research questions, and analyzing previous personas for gaps associated with those themes. After creating three personas to address those gaps, the students analyzed six personas (three old and three new) by developing a narrative for each persona focused on that persona’s experience with the Mozilla curriculum, from training to implementation to personal reaction. Using the narratives, the students illustrated the importance of workplace culture to participants’ experience and use of the curriculum because they found that theme was a significant determinant of how participants viewed and implemented the curriculum.

Personas



Priscilla

“Oooh, goody, another online program that will magically solve all our financial, organizational and emotional problems!”

“I’m happy to stay late to get this done.”

Ambitious and hardworking
 Focused on professional development
 Doesn’t love technology

Age	32		
Job	Librarian		
Education	MLIS from University of Washington		
Location	Seattle, WA		
Family	Married		
Personality	Conscientious Hardworking Caring		
Workplace Culture	Performance-Focused		
		GOALS	RELATIONSHIP TO TECH
		<ul style="list-style-type: none"> Wants to develop as a professional Wants to help library patrons in gaining professional and educational advancement Wants to use creativity in workplace Looking for tools to be more effective 	<ul style="list-style-type: none"> Skeptical; doesn’t love it for its own sake Is willing to work to master it if it has real-world application
		FEARS, CHALLENGES AND PROBLEMS	MOZILLA TRAINING
		<ul style="list-style-type: none"> Thinks technology is overrated sometimes Feels pressured to overperform Conflict between personal development activities and everyday duties 	Priscilla is skeptical and annoyed at first, but soon gains enthusiasm as relevance is demonstrated. Begins to implement curriculum.



Tilda

“How can we roll out new tech initiatives seamlessly to all of our librarians?”

“I can’t wait to get our guides earning those badges and developing their competencies!”

Tech evangelist

Enjoys inspiring people

Always “logged on”

Passionate and enthusiastic

Age 41

Job Tech guide

Education Bachelor’s degree in Computer Science

Location Providence, RI

Family Single

Personality Enthusiastic
Talkative
Passionate

Workplace Culture Early adopters
Innovative
Nontraditional

GOALS

- Build excitement around tech
- Provide tech training to develop staff’s 21st century skills
- Motivate the staff to produce innovative programming
- Become an influencer within the educational technology community

FEARS, CHALLENGES AND PROBLEMS

- Not sure how to make the curriculum adaptable to asynchronous training

RELATIONSHIP TO TECH

- Turns to leaders or peers in online communities for advice
- Uses social tech throughout the day, both at home and at work

MOZILLA TRAINING

The remixable aspect of the Mozilla curriculum helps Tilda promote the competencies to a wide range of staff, allowing them to explore the activities in a self-guided way.



Bill

“I haven’t used technology in 20 years. I can continue working based off my experience”

“I would like to learn programming if it was taught as an activity”

Intimidated by modern tech

Looks for perfection in every task

Highly experienced

Age 45

Job Librarian

Education MLIS from University of Oregon

Location Seattle, WA

Family Married

Personality Apprehensive
Unyielding
Perfectionist

Workplace Culture Conventional
Minimal use of technology

GOALS

- Wants stay abreast of latest web technology
- Wants to help library patrons in gaining professional and educational advancement
- Wants to use experience with technical knowledge
- Looking for easy learning techniques

FEARS, CHALLENGES AND PROBLEMS

- Thinks programming is too difficult to learn without experience
- Feels intimidated by complex codes
- Does not want to learn technology from his younger co workers

RELATIONSHIP TO TECH

- Minimal, uses only for necessary tasks
- Willing to learn if it was taught step by step

MOZILLA TRAINING

Bill is surprised to see many librarians of his age being actively involved in Mozilla’s events. He picks his motivation with the easy to learn activities through Mozilla’s curriculum and wants to master the art.

Narratives

Priscilla

Priscilla trudges into the first training session in the new Mozilla curriculum, annoyed and exasperated. This isn't library school. She, along with the rest of the staff at Greenwood Branch, has real work to do; there are people who need to be served and supervisors who will be very angry if things are allowed to slip. But those selfsame supervisors have ordained that all staff members have to attend this training; so here she is. Another useless let's-all-get-on-the-Internet-bandwagon evangelist meeting, Priscilla thinks, throwing herself into a chair. Great!

Once they get started, though, things improve. Priscilla even becomes a little intrigued. One of the first things the moderator does is explain how the new curriculum will improve staff members' career development and prospects; and Priscilla can see that these are all useful skills. The Mozilla modules look informative, easy to use, even fun; and she's relieved to hear that she is not required to learn the whole curriculum. There will be guided lessons and self-guided activities. The curriculum fits in well with her branch's long-term strategic plan, which she helped write, and that emphasizes personal development, especially in the technological area. She knows her technological expertise is average at best; this could be a good opportunity to improve her performance, not to mention her prospects. Her heart beats a little faster, thinking of being transferred to the big library downtown. She thinks it will be good for her patrons, too: providing a fun, easy way to learn coding and other skills can only be an improvement. She thinks of how many of her patrons are focused on finding jobs and improving their careers; this could represent a real opportunity for them. Even the children and teens may appreciate fun, easy-to-use online modules like this, especially if they could get them into a badges program.

Priscilla, along with her coworkers, approaches the curriculum with some suspicion, but growing interest. The lessons are easy to fit in around work, not being too long or overwhelming. Greenwood Branch adopts the badging system easily. It's fun, Priscilla thinks, to win badges and compete with one's coworkers, not to mention that wonderful moment when someone achieves a moment of discovery or understanding—bingo! Her supervisor and colleagues like her suggestion of a large, physical chart on the wall, where staff members can pin paper copies of their badges and compare their scores; soon the chart is covered in colored paper. Even better is when someone suggests that the staff members each create their own creative project using the Mozilla tools; Priscilla happily plans an exhibition. Maybe they could get the patrons in on this too!

Priscilla volunteers to take part in the Mozilla community calls, which are a good resource; this is especially valuable when she gets a little frustrated at how open-ended Mozilla's training approach is. Don't they realize that not everyone is a computer or teaching expert, and they might need a stronger framework? Her library may approach the curriculum with enthusiasm, but it's hard to remember sometimes that this is about learning new skills, not creating new projects. Usefulness might be better than playfulness in the curriculum modules.

On the whole, though, Priscilla is enjoying the new curriculum, and enjoying earning her badges. It's wonderful to gain technological skills that are truly relevant to her career! Already she's making plans for how to best present this to the branch patrons. She thinks her own previous experience with running workshops will come in very useful.

Tilda

Tilda enters her first “train the trainer” session hopeful and excited about the Mozilla curriculum. She feels the curriculum fits in well with her library’s culture which is focused on creating STEM-centered experiences for patrons of all backgrounds and ages. She wonders if the Mozilla materials could help the average learner to understand a coder’s experience of the web, and she think that Mozilla has given educators excellent tools with the Web Goggles and Thimble applications. She knows that librarians (referred to as “guides” in her library) are passionate about building for the web. In fact, she specifically thinks about the guides who will help patrons express their creative side in building with digital technologies within their Maker Studio.

As the training continues, she feels that the fun, accessible activities are a great motivator to learn. The competency map might even be helpful in training new staff. She notices that many of the activities are group oriented and seemed geared for in-person learning. This might be a great on-boarding, training tool! How can our new staff complete the modules or activities asynchronously? She also wonders how librarian guides will adapt the curriculum to suit their needs. They will have different levels of interest and abilities across the different modules. Nevertheless, she feels that the READ and WRITE modules offer the most beneficial applications to increasing digital literacy. Another question she considers: How can we roll this out the Mozilla curriculum seamlessly to all of our librarians and build excitement about digital literacy? She concludes that the library’s annual TechWeek would be a great platform for getting the different branches excited about building digital literacy and 21st century skills. Still, she’d love for more ways to make some of the activities and modules geared for solo or asynchronous learning, especially for new staff. Library guides participate in a “roving model of reference” – using mobile technologies and laptops to move about the library and help patrons do things like creating a presentation or downloading an e-book. She wonders how they can adapt the curriculum for this style of interacting with patrons.

After her first training, Tilda is an enthusiastic contributor during the Mozilla community calls, which offer her a community of practice. Overall, she enjoys Mozilla’s resources, along with participating and collaborating a group of librarians, educators, and tech enthusiasts from around the country. Currently, Tilda is excited to implement the new curriculum into their annual TechWeek. With her mind racing with ideas about how to train the librarian guides about the curriculum, she thinks: I can’t wait to get our guides earning those badges and developing their competencies!

Bill

Being the lead Librarian at Seattle Central Library, Bill prides his reputation of having 20 years of experience. He is the go-to person in the library for any questions based on his experience of answering all types of questions patrons ask. Having been away from technology for the past 20 years, Bill is intimidated by the Mozilla curriculum. He is reluctant at first, but wants to join a young librarian, Mark, to see what this is all about, and so decides to attend the first session.

To someone with absolutely no experience with technology, the training sessions seemed helpful. He participates in several activities which had a proper step by step procedure to learning. Bill sees the outputs of what he is doing on the screen, and is quite intrigued. Bill feels comfortable with this interactive approach, and felt he was doing well in the training. He wants more time for the content to sink in, and wishes that the session was a little more

detailed. He could see how learning technology will help librarians from his library to perform their daily tasks well, but realizes that it requires a little bit of practice. Bill is also concerned with the amount of time and energy he must invest to learn this new technology, as well as work as a fulltime librarian.

After the first training session, Bill still feels that teaching the Mozilla curriculum at their library wouldn't necessarily help librarians to excel at their work. Upon Mark's persistent request, Bill agrees to launch a training program at his library. Bill and Mark feel that the content can be organized into different modules. Based on their learning, Bill thinks that all the librarians should participate in at least two training sessions to get used to using technology in their daily work practice. The other modules are optional, based on librarians' interest and time availability. Bill wants to use his tremendous librarian training experience along with Mark, to put together a curriculum for his library.

The first training session is not so great. The library staff who participated say that the skills taught are too high-level, and they don't see how this will apply to their day to day work. Drawing from his experience and from the training, Bill then connects the dots and teaches library staff where they could use these skills in their daily life. He tells them that time and practice will make them better. Now all the librarians seem to follow what they are learning, and how those activities will help them in long run.

Bill now understands the value of technology in career development. With the help of technology, he is teaching young librarians what he learned during his 20 years of experience answering patrons' questions, all at ease. He feels that he could adapt the curriculum based on the interest of librarians due to the curriculum's open-endedness. To encourage all the librarians, he wants to introduce the badging system in the upcoming sessions. He looks forward to attending more web literacy sessions and implementing the same at his library.