

# Capturing Impact

## Sharing Stories of Makerspace Successes

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A child and her mom experiment with a laser cutter at Skokie (IL) Public Library.

**O**n an incredibly hot Saturday afternoon in August, a group of ten kids are gathered around a table with Mars Patterson, the current Bubbler Artist in Residence, hands twitching to touch the collection of Instax cameras in front of them. Parents look a little skeptical, but the kids listen carefully to Mars' instructions.

Mars lays out the children's task—she is encouraging kids to look at their environment (the Madison (WI) Public Library's Children's Area) with fresh eyes—to take photos of interesting shapes, lines, colors, and textures that they see. There are enough cameras for some of the parents, too, and so, armed with guidance and equipment, families set off together on a mini adventure.

The result? A beautiful array of color, line, and shadow, depicting everyday objects in completely new ways. "Her photos are so much better than mine!" one parent exclaims. Kids beam with pride, pointing, and explaining each shot earnestly to Mars.

In public libraries, magical moments of discovery, pride, agency, and creativity are happening every day. Sometimes that moment

manifests in an expectant silence as hands and minds are engaged in a task, and at other times, the moment bursts to life as patrons start to open up to librarians and each other as they work.

We've seen it happen, we've told those stories to each other or even managed to snap a photo of the action in real time. Librarians are natural collectors. We collect stories and store them in our memories or maybe in a journal, or photos . . . somewhere? A Google drive? A desktop computer? A great big album on the library iPad? And, of course, attendance numbers.

Yet, when it comes time for a newsletter, quarterly report, presentation to our board, or grant review, we're often left scrambling. Starting from scratch each time to pull together information and documentation so we have enough data to show the impact of our programs. Or, trying to set goals and priorities for the next season of programming, while relying on only anecdotal rememberings of what went well and what didn't from the past cycle.

For several years, the Bubbler [makerspace] at Madison Public Library has been working to create systems of consistent



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*promoting twenty-first century skills.*

documentation and genuine assessment of our impact. Systems that would allow us to have evidence-based conversations that support growth or change, as well as streamline how we tell stories to funders, colleagues, patrons, and the public.

For the last eight years, we've been collecting data about our programs. With paper forms, Google surveys, shared photo drives, and even formal research projects with academic partners capturing evidence of critically thinking, innovating, or making connections to each other and the world through making—traditionally hard to measure outcomes, but outcomes that matter to us and our patrons.

But capturing these magical moments isn't like recording attendance numbers and comparing results from year to year. It's about collecting stories over time to find the connecting threads and point to the larger impact of a program or series over time. It's challenging and time consuming. We desperately needed better tools.

But this isn't just about the Bubbler at Madison Public Library. It is about the broader shift in practices of libraries around the country supporting hands-on experiential learning. Whether it is called arts or maker or STEAM, our spaces are busy with patrons looking for ways to learn and create in an environment that is welcoming and low risk. We all need ways to better report the impact of these shifts—and luckily the Institute for Museum and Library Services (IMLS) agreed, choosing to fund our project in 2021 with a National Leadership Project grant.

To expand our understanding, we recruited two additional partners with strong backgrounds in maker or STEAM programming and spaces, but with dramatically different infrastructures from our own. Waupaca, WI, is a small (population 6,000) but mighty provider of STEM learning in their community in Northern Wisconsin, and Skokie, IL, a bustling Chicago suburb (population 66,000), is a leader in innovative spaces with access to professional maker tools.

Expanding even further, we began with a national survey of fifty libraries to assess technological barriers. We asked about IT departments, obsolete devices, intellectual property, and data management. We learned any toolkit we designed needed to be web-based—as to not be reliant on a specific platform or device (like the Apple store) or on an IT department to manage updates, and ideally it would be open source.

The Observation Deck is a collection of open-source tools for libraries to install directly onto their own servers. We are



Madison (WI) Public Librarian Carissa Christner actively observes and listens to participants at Anji Playdate, an open-ended true play program.

building this using Directus with a custom website interface for the observer and reporting tools.

We also dove deep into what outcomes library staff and patrons found meaningful, building on the Bubbler's own research into hands-on learning outcomes, as well as Skokie's and Waupaca's strategic plans and principles of program design. These outcomes, specific to each institution, allowed us to create frameworks for observation.

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Building these frameworks was a major breakthrough in itself and opened up deep conversations within our library teams about what we were already seeing in our programs and spaces. *What do those outcomes look like? Sound like? Where do our biases creep in? And what can we do as facilitators and observers to draw out responses from our patrons to better hear and see what's happening in their brains while they engage?*

Through these conversations, we were able to start building best practices for observation and data collection. When we finally had the prototype for data collection in our pocket to capture photos, record quotes from patrons, and

make notes in real time, the feeling was astounding.

We are now beginning to collect a trove of organized data that shows the impact of our hands-on, experiential programming. We can see which programs seem to most successfully spark agency and ingenuity, and really ask ourselves *why?* What is the



"Mom, look at these!" An excited child uses giant slinky tubes to make a nest during Anji Playdate.

alchemy of a really successful program experience? And how can we recreate that again and again?

We're able to communicate that magic through evidence-based stories. Like when our patrons delighted in making LEGO ziplines, but were also practicing problem solving, iterative design, and building connections with each other—now supported with quotes and photos to showcase their learning and growth.

And it's organized! How amazing to remember a moment and have the evidence from that day at your fingertips with just a couple of mouse clicks or swipes.

As we dive into first round testing, we're only just beginning to understand the opportunities and impact of our toolkit. Every day, we're learning new things, thinking about additional applications, and getting more and more excited for the ways our own libraries can utilize this tool, but also for libraries across the country to put it to use.

In the next six months, we will roll the tool out to three to five additional libraries for continued testing and feedback gathering,



A child and caregiver test and retest this LEGO zipline at the Waupaca (WI) Public Library program in the park.

as we work to perfect both the software development and the observational practices and training. We will be selecting the libraries in Dec/Jan through a short application process to identify a diverse sample of libraries both in size and population.

Looking forward, we have serious questions to consider around the scalability of the tool and the sustainability of the community of librarians using it. We know these magic moments are happening in libraries across the country, and we're excited to provide tools that empower library staff to tell the story and show the impact of the work they do every day.

This spring, the grant team will be tackling the creation of a sustainability and expansion model, working to build out the technical infrastructure of the tool and partnering with the Wisconsin Department of Public Instruction and the Public Library Association to explore collaborative options. &

*If you are interested in project updates, visit [www.madpl.org/libtoolkit](http://www.madpl.org/libtoolkit).*