STEM IN LIBRARIES| **Evaluation Toolkit**

STEM LIBRARIES

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The *STEM in Libraries: Evaluation Toolkit* provides resources to help you understand the essentials of program evaluation and why it matters.

You will learn to:

- Learn the steps involved in planning and carrying out an evaluation of your library's STEM-related programs.
- Identify resources to help you measure the impacts of your STEM programs.

What's inside:

- What is evaluation and why is it important?
- Evaluation planning
- Collecting data
- Analyzing and reporting data
- Additional resources

What is evaluation and why is it important?

Evaluation measures more than numbers

> *"Program evaluation is the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decisions about future programming."*
>
> —Michael Quinn Patton
> **Utilization-Focused Evaluation**

> *"Library managers and boards are facing increasing pressure to justify library services in ways that go beyond the standard measures of circulation and program attendance. Both funders and taxpayers want to know what difference the programs and services that are funded with tax dollars make in the lives of the people who use those services.*
>
> *"Outcome measurement provides the means to answer those questions. Outcomes are defined… as "the benefits to the end user that demonstrate the effectiveness of a program or service. The benefits usually are changes in user knowledge, skills, behavior, attitude, or condition that may not have happened without the program or service."*
>
> —Rhea Joyce Rubin
> **Demonstrating Results: Using Outcome Measurement in Your Library**

Libraries have traditionally focused their data collection efforts on reporting numbers, and these numbers have been primary measures of success: numbers of patrons, collection sizes, circulation numbers, numbers of programs. As Rhea Joyce Rubin notes, however, libraries and other public agencies and nonprofits are under increasing pressure to report on outcomes—not just how many people they serve, but what difference their activities and services are making for participants.

Evaluation can help you answer questions about impact and much more. As Patton notes, evaluation is the use of data to assess impact ("to make judgments"), but also to improve program effectiveness and make decisions about where to focus your efforts going forward.

The Institute for Museum and Library Sciences (IMLS) similarly emphasizes the multiple uses of evaluation. In its evaluation guide, **Outcome Based Evaluation Purposes**, IMLS notes that "the two most important purposes of evaluation are (1) to provide essential information for good decisions about priorities, deployment of resources, and program design, and (2) to help communicate the value of initiatives."

Five reasons to evaluate

Evaluation can help you accomplish multiple goals:

- **Accountability**: Demonstrating effective program implementation to funders
- **Proving program impact**: Making the case that what you do makes a difference
- **Program improvement**: To see what's working, using data to improve program quality and effectiveness
- **Marketing and fundraising**: To generate support for your program
- **Knowledge development**: To generate information that will improve the quality of practice in the field

Evaluation tips

Here are some tips for designing evaluations that ask the right questions to measure program quality and impact. This toolkit will go into more detail about how to design your evaluations for success.

- Design data collection and evaluation to meet your needs. There is no one "right" approach.
- Start with the questions, not the evaluation instrument.
- Involve your stakeholders in the process.
- Make effective use of the resources (people and information) you have on hand.
- Use logic models as tools for planning and reflection. It is worth the time!
- Make evaluation a living, useful process—a "want to" instead of a "have to."

Evaluation planning

There is an old adage that "those who fail to plan, plan to fail." This applies to program evaluation much as it does to other endeavors. The key to a successful evaluation is taking the time up front to do some planning.

Key evaluation planning questions

Some of the questions you will want to think about include:

- What stakeholders need to be involved in planning and carrying out the evaluation?
- Who is the audience for your evaluation? Who will need to see, understand, and use the data you collect?
- What do you want to know about the program? What questions do you want to ask—and answer?
- What kinds of information do you need to answer those questions? What data should you collect?
- How do you plan to analyze and report the data you collect?
- How will you use the results?

Taking the time to answer these questions up front is a key step in developing an evaluation that is both credible and useful to you and the others interested in your program.

What stakeholders need to be involved?

The first step in planning an evaluation is to create an evaluation team for your project that includes the key "stakeholders" in the program and the evaluation. Stakeholders are those people with an interest—a stake—in your program or evaluation. Stakeholders might include program leadership and staff, board members, funders, program participants, and others.

By involving stakeholders in the evaluation planning, you can help make sure that you get needed buy-in, that you are asking the questions decision-makers want answered, and that the evaluation addresses the most important elements of your program. This early involvement will help to ensure that the evaluation itself can be carried out effectively and that your stakeholders accept and appreciate the results of your program evaluation later.

When you think about whom to invite to be part of the evaluation team, you may want to consider both the decision-makers from whom you want support, and the "worker bees" who will help you get the job done—and who often have the best understanding of the practical issues in collecting data at the library.

Once your evaluation members are selected, they can help you define your evaluation questions and plan the steps to take for your evaluation.

Identifying evaluation stakeholders

Evaluation planning should include those who have an interest in the results or can inform the process. Potential stakeholders may include:

- Library or project funders
- Library board members or trustees
- Library administrators
- Library staff
- Library patrons or program participants
- Community leaders and supporters
- Partner agencies
- Others with an interest in the library

Who is the audience for your evaluation?

As you assemble your stakeholders and begin to plan your evaluation, it is important to think about the purpose of the evaluation and the target audience(s). Different audiences have different interests.

- Some audiences may primarily care about how the program was implemented: Whom you served, whether key activities took place as expected, lessons learned for future programs, etc.
- Others may only be interested in outcomes: What kind of impact did your program have on participants, the library staff, or the library's role in the community.
- Others may have a particular interest they want addressed: Services to young women or low-income residents, for example.
- Some audiences, such as funders, might require a particular type of evaluation study or a particular level of evidence.

Thinking about who the audience is for your evaluation helps guide the kinds of questions you want to ask, what kinds of data you want to collect, and how you are going to analyze and report the data you collect. Thinking early on about audiences can also help you identify the stakeholders you want to recruit to your evaluation team.

Determining evaluation audiences
The audience for your evaluation may include key stakeholders and others: • Library staff, administrators, and board members or trustees • Local government officials • Local media • Community members (voters!) • Business groups • National networks or associations • Local, state, or federal funders • Foundations or other potential donors

What do I want to know about the program?

Program evaluation can answer many different types of questions. You might be interested in describing the context for your project; you might want to document the program implementation, capturing the numbers and types of activities and assessing whether the program took place as intended; or you might want to examine whether the programs and services had the intended outcomes.

What you want to know will influence the type of evaluation you carry out. Major types of evaluations include:

- **Context evaluation:** Understanding the context or circumstances of the program
- **Implementation or process evaluation:** Understanding how the program is being implemented; documenting program activities
- **Outcomes or impact evaluation:** Assessing the results of the program

Most evaluations involve asking several different types of questions, including questions about context, implementation, and outcomes. Asking different types of questions often helps you better understand why the program generated a particular set of results.

The questions you ask will depend on:

- The purpose and audience for the evaluation (who wants to know what and why)
- The goals of the program
- The time and resources you have for data collection and analysis

There is no single "right" question to ask. You need to think about what you want to know. The following section will give you some tools for defining your evaluation questions.

Collecting data

What questions should I ask?

How do you decide what questions to ask and what to measure? To answer that, you need to define the key elements of your program, the assumptions driving your plans, and the outcomes you expect to achieve.

The type of evaluation you use depends on what you need to know about your program.

For a context evaluation, consider:

- Who am I serving?
- What are the needs and interests of my service population?
- What barriers (social, economic, educational, etc.) might limit participation?

For an implementation evaluation that documents activity, consider:

- How many events, projects, or activities took place?
- How many people participated?
- What were the characteristics of participants?
- What were the costs of the program? What were the funding sources?
- What resources were used? By whom, how, and how often?

For an implementation evaluation that helps you understand the program's process, consider:

- Was the program implemented as expected?
- What parts of the program worked well, and what parts need to be strengthened?
- Did the program staff have the resources and training they needed?
- How satisfied were participants or patrons with their experience?

For an outcomes or impact evaluation, consider:

- How did participant's knowledge, attitudes, skills, behaviors, or condition change as a result of the program?
- How did the knowledge, skills, and attitudes of library staff and partners change?
- What contributions did the program make to the community?

An increasingly common tool for determining what to ask and measure is a *logic model*. A logic model is a picture or a map of how your program works. It brings together in one place the basic elements of your program: whom you are planning to serve, the theory or assumptions underlying your program, and the key strategies and expected outcomes. A logic model helps you to see how the pieces of your program fit together and what processes and outcomes you might want to include in the evaluation.

See "Developing Your Logic Model," listed in the Additional Resources section of this toolkit, for more information on how to create and use a logic model in planning an evaluation.

What data should I collect?

Once you have figured out what questions you want to ask, you can begin thinking about what kinds of data will help you answer them. Different questions often call for different types of data (see the table below for examples). Here are some ways to help make the data collection process more effective and doable:

- **Match the data to the questions.** What kind of data fits the questions you want to answer?
- **Collect and analyze data from multiple perspectives.** Ideally, don't rely on just one type of source. For example, your evaluation can use a combination of surveys and interviews.
- **Think about what data you already collect.** Can you answer some questions using existing data?
- **Consider what process and format to use for data collection.** Some data is easier to collect using traditional paper-and-pencil forms or surveys; other times it may make more sense to collect data through an electronic form—an online survey or set of surveys filled out using a tablet or other device. What process and format best fit your circumstances for data collection?
- **Build data collection into everyday operations.** Can you add some questions to existing forms or procedures? Can you build a monthly or quarterly data collection routine instead of a once-a-year project?
- **Call on others for help.** How can your Library Friends group, volunteers, parents, and young people help? Can you partner with local college faculty or students?
- **Set priorities.** Use the planning process and a logic model to focus on the most important information.
- **Only collect data that you think you are going to use!** Resist the "it would be nice to know" questions and focus on the "need to know" questions.

The table below gives examples of question types and matches them to potential data sources.

Question types	Sample data sources
Describing context *Who am I serving?* *What are the needs and interests of my service population?*	• Public records • Local economic development data • Census data • Community or patron surveys • Interviews with community representatives or local leaders • Focus groups with residents
Documenting activities *What activities took place?* *Who participated?*	• Library activity reports • Attendance records or lists • Circulation data • Examples of products or kits • Computer usage data • Photographs and videos
Understanding process *What worked well, what needs to be strengthened, and why?*	• Participant or patron surveys • Program partner surveys or reports • Interviews with participants, partners, etc. • Focus groups • Observations
Assessing outcomes *Did the programs or activities make a difference for participants, the library, or the community?*	• Participant surveys • Skill assessments (such as digital badges) • Circulation or other library usage data (show change over time) • Community or patron surveys • Interviews with participants, staff, or community representatives • Focus groups • Parent interviews or focus groups (for children's programs) • Participant projects or portfolios

Analyzing and reporting data

How do I plan to analyze and report the data?

The kind of data you collect, your internal expertise or capacity, and the audience for your evaluation can have important implications for how you analyze and report your results. Does your library staff have the tools and expertise to analyze and report results, or do you need to recruit some additional expertise? Thinking ahead about the kind of analysis your project requires will help you assess whether you have the resources to do the analysis, or whether you need to get some outside help.

Analyzing your own data

If you want to collect and analyze your data in-house, there is a growing number of free or moderately priced tools available to help you with basic data collection and analysis. Basic online survey systems like **Google Forms**, **Survey Monkey**, or **Survey Gizmo** make it possible to design and collect survey data relatively easily. Most of these tools will allow you to download your data into a spreadsheet file for analysis, and many offer some basic analysis (such as frequencies and cross-tabs) and reporting formats built into the program. Your library or a partner organization may already have and use these programs and be able to provide access. If you take this route, you will still need to design your own data collection surveys or other tools and make sense of the results.

Working with an outside evaluation partner

For more sophisticated data analysis and reporting, it may make more sense to find a partner with the requisite data analysis skills and experience. One option might be to find a local college or university with research faculty or graduate students who might be interested in helping the library with a project or doing a research-related internship. The more sophisticated the analysis, the better it is to find a partner or consultant with research experience. For complex evaluations, it also makes sense to involve evaluation partners in the evaluation planning. They can often help you formulate your questions and design your surveys and other data collection tools so you will get the information you need.

Finding a partner—for collecting and/or analyzing the data—may also make sense if you plan to conduct interviews and focus groups. Interview and focus group participants may feel more comfortable responding to an outside interviewer they see as more neutral than a library staffperson, and participants may be more candid or forthcoming in their responses as a result. Similarly, analysis of interview or focus group responses can be time consuming and may be more easily done by a consultant or volunteer partner than by library staff.

Joining evaluation collaboratives

You may also want to consider joining a collaborative data collection effort like **Project Outcome**, operated by the Public Library Association. Project Outcome provides a common set of evaluation tools for public libraries, including tools for data collection, survey analysis, and standardized report generation. If the outcome areas included a program like Project Outcome match the priority outcomes for your library's programs, the collaborative can provide an easy way to collect and analyze data, as well as to access comparative data from other libraries.

Options for data analysis and reporting

How you analyze your data will depend on the types of data you collect, your internal capacity, and the audience for your results. Some options to consider include:

- **Using online software** (Google Forms, Survey Monkey, etc.) that provides online surveys and basic analysis.
- **Finding an evaluation partner** (a consultant, a local university, or a nonprofit partner) with expertise to conduct more sophisticated analysis and reporting.
- **Joining an existing evaluation collaborative**, such as PLA's Project Outcome, that provides ready-made surveys and analysis tools—if their evaluation strategy aligns with yours.

Matching evaluation reports to audiences

Finally, the way you report your evaluation data should match the audience you are reporting to. Some audiences (funders, for example) may want a formal report with detailed graphs and tables. Other audiences may appreciate having a more simplified reporting format with fewer numbers and simpler charts. Still others may do best with reports that focus on key headlines and pictures. Presentation software (such as PowerPoint or Keynote) or infographics software (for example, **Canva**, **Vengage**, or **Piktochart**) make it easier to create highly visual, attractive reports.

How am I going to use the results?

Just as it makes sense to plan how you will collect and analyze your data, it is important to think about how you will use the results. There are many ways you can use your findings and the evaluation process itself not only to demonstrate impact, but also to improve programming and build staff capacity.

Are you planning to use the evaluation to inform program improvement? To build support among funders, program administrators, or policymakers? To serve as the basis for program planning? To increase the capacity of program staff? Are you expecting to share the results with other external audiences, such as for marketing, recruitment, or fundraising purposes? As you begin to answer these questions, you may want to rethink the stakeholders for your project, and possibly even add people to your evaluation team. You may also want to revise or refine your evaluation questions.

The key here is to treat evaluation as a practical enterprise. The more you think ahead about the uses of your evaluation, the more likely the evaluation will meet your needs—and repay you for the time and energy you invest.

Make the most of your evaluation efforts

Use your findings to:

- Improve your program
- Demonstrate the effectiveness of the program
- Build support among key stakeholders
- Plan for growth or expansion

Use your evaluation process to:

- Build shared meaning and understanding
- Support and enhance the program
- Support human and organizational development

Additional resources

"Logic Model Development Guide" This guide was developed by the W.K. Kellogg Foundation to provide practical assistance to nonprofits to explore the underlying principles of "logic modeling" and how to use this tool to enhance program planning, implementation, and dissemination activities.

https://www.wkkf.org/resource-directory/resource/2006/02/wk-kellogg-foundation-logic-model-development-guide