



Measurement and Evaluation Checklist

This tool is part of Mathematica’s suite of measurement and evaluation (M&E) tools, which provides a road map for generating timely and actionable evidence about what works for whom, and in what context. The tools were designed to promote rapid innovation and scaling of promising solutions (such as programs, practices, or products). The Measurement and Evaluation Checklist is used in Step 2 and Step 4 of the M&E process.



Learn more about the M&E process and other tools here:

<https://www.mathematica.org/features/advancing-educational-equity>

Who should use the Measurement and Evaluation Checklist?

Funders and organizations, with support from a research partner, can use or adapt the checklist.

What is the Measurement and Evaluation Checklist?

The M&E Checklist is a resource that guides users through an evidence-building process as they design, refine, and test a solution in collaboration with community partners. The M&E Checklist includes four documents—one for each of the evidence-building phases: Design the Solution (Phase 1), Refine the Solution (Phase 2), Assess for Early Evidence of Success (Phase 3), and Validate Effectiveness (Phase 4). The checklist activities focus on iterative learning, which may mean completing a phase multiple times, moving backwards to a previous phase, or abandoning a solution altogether. The checklist serves several purposes:

- ✓ **Design and evaluation planning.** Organizations designing and implementing solutions can use the M&E Checklist with support from a research partner during Step 2, Plan M&E, as a guide to develop a detailed M&E Plan—or road map—to address key research questions for a given phase of the solution’s development.
- ✓ **Reporting.** Organizations—and funders, where relevant—can also use the M&E Checklist during Step 4, Analyze and Report Results, to assess the extent to which the plan was executed as intended and the extent to which the targets for a given phase of the development were met (as reported in the M&E Reporting Template).

- ✓ **Organizational or grantee alignment.** The M&E Checklist can also be used to align goals and objectives for the M&E work across an organization and its funder, when applicable. For funders working with multiple organizations, the M&E Checklist also promotes continuity across M&E Plans, allowing for streamlined review, improved understanding, and cross-solution comparisons.

In each phase, the checklist includes the following:

- **Key assumptions.** The activities organizations should have completed or targets they should have achieved before entering the current phase. If your organization did not complete the activities described in the key assumptions, consider starting at an earlier phase.
- **Reflection questions.** The questions that organizations can ask themselves to help them revisit their assumptions, center equity in their work, and plan next steps.
- **Principles.** Focus areas that guide the work across all phases. The principles include equity and community voice, program articulation, implementation, outcomes, scalability, and knowledge sharing.
- **Planning and execution activities.** The activities organizations should plan for and then complete before exiting the phase. Although organizations may plan for and execute *some* activities within a phase at first, all activities should be completed before exiting the phase.
- **Checkpoints.** Prompts for organizations to pause and reflect on learnings to-date to inform improvements to the solution design and updates to the M&E Plan. At each checkpoint, organizations can review the findings to determine whether to advance to the next phase, continue iterating in the same phase, or return to an earlier phase.

Phase 1: Design the Solution



The goal of Phase 1 is to develop a solution based on a well-defined theory of change for how that solution is expected to lead to improved outcomes for students (or teachers) in a specific community.

Before entering Phase 1, your organization should already have partnered with a defined community to identify the problem they hope to solve during Phase 1. During Phase 1, organizations and community collaborators work together to unpack the problem and co-design a solution. By the end of Phase 1, the solution should have a well-defined theory of change that is developed in partnership with the community in focus.

Key Assumptions. Before beginning activities in Phase 1, organizations should have completed the following activities:

- ✓ Partnered with the community in focus to identify the problem you hope to co-design a solution for
- ✓ Secured buy-in from community collaborators, organizational leaders, and implementors



As a fictitious illustrative example, before entering Phase 1, an organization and the community in focus might jointly decide to solve the problem of:

- Chronic absenteeism in its school, or
- Interrupted learning due to COVID-19, or
- Low math scores



Equity and community voice activities are central to the evidence-building process and are integrated throughout this checklist.

When organizations partner with communities and include the voices and interests of the community in designing the solution and planning and executing the evaluation, both the solution and the evaluation will be more relevant and meaningful to the community in focus and are more likely to be successful. Activities associated with equity and community voice focus on identifying collaborators from the community in focus who will partner and work with your organization to plan and execute all activities in each phase. Community collaborators can also help organizations identify the best ways to engage and learn from the community in focus during each phase.

How are you planning to use this checklist?

Select one:

- Planning.** Make a plan for how you will complete these activities.
- Execution.** Confirm that the activities were completed.



Principle: Equity and Community Voice

Solutions are designed, improved, and tested through partnership with community collaborators.



Planning and execution activities

Organizations should plan for and complete the following tasks in Phase 1.

- Clearly and narrowly define the community in focus and specify the intended solution users.
- Identify community collaborators and partner with them throughout this phase to:
 - Unpack the problem
 - Design a solution, including developing a well-defined theory of change
 - Understand the implementation context
 - Identify outcomes meaningful to the community in focus

Notes

Phase 1: Design the Solution



Reflection questions

1. Whose voices should be included in designing the solution? Whose voices will not be included? How do you plan to include and value the lived experiences of students, teachers, or other community collaborators when designing the solution (and in later phases – planning and executing the evaluation)?
2. Have you considered the power and privilege you (as an organization, researcher, or funder) bring to this process? How will you prioritize the voices of stakeholders with less power or privilege? How are you acknowledging and redistributing your power and privilege throughout the activities in this phase?
3. How can you acknowledge and mitigate assumptions that you have as a researcher about what is worth researching, what counts as research, and who can participate in designing and conducting research?
4. What biases do you have about the community in focus, and how might those biases influence how you plan for and execute the activities in this phase? How can the problem be defined in an asset-based way that focuses on community aspirations and contributions?



Checkpoint

Before continuing with the activities in Phase 1, organization establishes a partnership with a community that is interested in completing Phase 1 activities.



Principle: Program Articulation

Solutions are well-articulated and continuously refined.



Planning and execution activities

- Identify the problem:**
 - Unpack the identified problem by describing the root causes of the problem, including how inequality and structural racism contributed to the problem.
 - If known, describe how existing or previous solutions to the identified problem were successful or unsuccessful in the community in focus.
- Design the solution:**
 - Identify community assets, strengths, and needs related to the identified problem.
 - Design a solution and describe rationale for its design and need.
 - Describe how the proposed solution differs from existing solutions to the problem and improves upon existing practice.
 - Produce a well-defined theory of change. Include the solution's:
 - Activities and strategies
 - Outputs
 - Short-term and long-term outcomes

Notes



Organizations and research partners should collaborate and partner with community members to plan and execute all activities.

Phase 1: Design the Solution



Reflection questions

1. How does the proposed solution address the problem previously defined with the community in focus? Does the solution address root causes of the problem? Does the solution reflect an understanding of the causes of inequality and structural racism?
2. Is the solution informed by and aligned with the needs and interests of the community in focus within this solution context?
3. Does the solution make use of community assets or build on community knowledge and experience? For example, has the community tried to implement any solutions to address the identified problem in the past? Why did those previous initiatives succeed or fail?
4. Who will benefit from the proposed solution, and how will they benefit from it? Will this solution cause any harm?



Checkpoint

Organizations should develop a solution and well-defined theory of change that addresses the problem the community in focus has identified before proceeding to Phase 2.



Principle: Implementation

Solutions account for implementation context and are successfully implemented in the community in focus.



Planning and execution activities

- Describe the intended implementation context, which includes the people or human-centered context as well as the technical or structural context.
- Identify anticipated facilitators and barriers to implementation and describe how the solution design accounts for them.
- Describe in narrative form a plan for how the solution should be implemented in the community in focus, accounting for the implementation context.
- Identify outputs that are meaningful to the community.

Notes



Organizations and research partners should collaborate and partner with community members to plan and execute all activities.

Phase 1: Design the Solution



Reflection questions

1. How does the history of the community in focus, including structural racism, affect how the community might accept or reject the proposed solution? How will your organization work to develop trust between yourself and implementors?
2. How has oppression on the basis of race and ethnicity, immigration status, sexual orientation, and socioeconomics, among other characteristics, created barriers to using the solution?
3. In the past, what has made it easier for the community in focus to embrace new programs or practices? What has hindered the adoption of new programs or practices? To what extent does this solution align or integrate with current community practices?
4. Are the outputs identified in the theory of change meaningful to the community in focus? How are tensions between researcher and community preferences for programs, practices, or outputs identified and resolved?



Principle: Outcomes

Solutions generate evidence of improving outcomes for students and their teachers.



Planning and execution activities

- Identify outcomes that are meaningful to the community in focus.
- Use existing evidence, where available, to justify expected outcomes.

Notes



Organizations and research partners should collaborate and partner with community members to plan and execute all activities.



Reflection questions

1. Are the short-term outcomes and long-term outcomes identified in the theory of change meaningful to the community in focus?
2. How will you reach consensus if the community identifies outcomes different from those your organization, researcher, or funder identifies?
3. What prior research or evidence exists to support the outcomes you hope to achieve?



Principle: Scalability

Solutions can be expanded, replicated, and adapted to improve outcomes for more students.



Planning and execution activities

- Document the incidence of the identified problem in broader context.
- Describe how the anticipated facilitators, as well as any anticipated barriers, may help or hinder the solution's take-up beyond the community in focus.
- List the types of alternative solutions available to address the identified problem.

Notes



Organizations and research partners should collaborate and partner with community members to plan and execute all activities.



Reflection questions

1. How widespread is the problem beyond your defined community in focus? Are there other similar solutions available in the market, and if so, what are they? How many are there?
2. Does the solution have features that will be difficult to expand, replicate, or adapt beyond the current site?
3. Do you have concerns about the cost of the solution? Who will bear the cost of the solution?



Principle: Knowledge Sharing

Presentation of research findings is easy to understand and is shared with others including the community in focus.



Planning and execution activities

- Share Phase 1 learnings, including how this information will be used to inform the solution design, in accessible ways with the community in focus.

Notes



Organizations and research partners should collaborate and partner with community members to plan and execute all activities.



Reflection questions

1. How will you share what you learned in ways that are nontechnical and accessible to the community in focus and relevant to their cultural context?
2. If you hold a meeting to share findings, have you given community collaborators enough notice? Is the time, location, and format of the meeting convenient for community members, including parents?
3. Are there ways to partner with community collaborators to interpret, analyze, and present findings?
4. Are there ways to identify how the needs and interests of the community are addressed in the planned solution?

Acknowledgments

The authors extend their heartfelt thanks to the many individuals who contributed to the development of this Measurement and Evaluation (M&E) Toolkit. In particular, we appreciate our grantee partners and the communities they serve for their rich engagement with and collaborative approach to the M&E process. We thank our technical assistance liaisons for pilot testing and providing feedback on the M&E process and early versions of these tools. At Mathematica, we recognize Alexandra Resch, Ruth Curran Neild, John Deke, and Elias Walsh for their guidance and quality assurance review; Sheena Flowers, for her creative design ideas and superior production assistance; Brittany Tabora, for coordination with external expert reviewers; Liah Carvalho, for leading our dissemination strategy; Jennifer Brown, for editorial support; and Theodora Vorias, for her help developing the glossary.

The authors also thank the following 12 external experts who offered invaluable feedback on the structure and content of the M&E Checklist and supplemental tools: Dr. Kristine Andrews, Ideas to Impact, Inc.; Dr. Emily Barton, University of Virginia & the EdTech Evidence Exchange; Dr. Beth Boulay, Abt Associates; Cathryn Cook, Saga Education; Dr. Fiona Hollands, Teachers College, Columbia University; Dr. Stafford Hood, Center for Culturally Responsive Evaluation and Assessment/University of Illinois at Urbana-Champaign; Karina Jaquet, WestEd; Dr. Heather King, Impact Genome Project; Chris Liang-Vergara, AERDF; Dr. Janelle Scott, University of California, Berkeley; Bi Vuong, Project Evident; and Dr. Tanisha Tate Woodson, Education Northwest. Responsibility for the final content of these materials is ours alone and should not be construed as individuals' or institutional approval of the tools.

In addition, we also consulted the following resources and standards to inform the development of this checklist:

- Loper, A., Woo, B., & Metz, A. (2021). [Equity is fundamental to implementation science](#). *Stanford Social Innovation Review*, 19(3), A3–A5.
- Regional Educational Laboratory Midwest at American Institutes for Research. (2018). [Aligning evidence-based clearinghouses with the ESSA tiers of evidence](#).
- Richman, S., Maxwell, N., Needels, K., & Anderson, M. A. (2020). [Scaling Checklists: Assessing Your Level of Evidence and Readiness \(SCALER\). A guide for practitioners](#) (Final report submitted to the Corporation for National and Community Service). Mathematica.
- U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, What Works Clearinghouse. [\(Click here to reference the WWC Handbook](#) and [click here to reference Common Guidelines for Education Research and Development](#)).
- Woodson, T. (2020). [Using a Culturally Responsive and Equitable Evaluation Approach to Guide Research and Evaluation](#). Mathematica.

Checklist Authors: Ryan Ruggiero, Mikia Manley, Virginia Knechtel, Kate Place, and Megan Shoji

This publication was prepared for the Bill & Melinda Gates Foundation. The findings and conclusions contained within are those of the authors and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation.