Design Research Plan Template

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| 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 Design Research Plan Template is used in Step 2 (plan) and Step 3 (conduct) 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 Design Research Plan Template?

The Design Research Plan Template is ideal for organizations that want to incorporate the needs and preferences of the communities they intend to reach into their solution design. Such organizations can use the template to plan their approach to working with and centering the perspectives of their community collaborators. Community collaborators are people from the communities served by the solution who contribute to any part of the M&E process. For example, community collaborators in design research around a tutoring solution might include tutors, the students they work with, parents or caregivers, classroom educators, or school administrators from the district or school that will participate in the tutoring program. These collaborators might participate in qualitative interviews, think-alouds, or surveys; co-develop the learning objectives or approach; and co-interpret findings to plan for adjustments to the solution.

Organizations and their community collaborators may use the Design Research Plan Template independently, or with support from a research partner. A research partner could be staff within the organization who have expertise in evaluation, or an external organization, technical assistance provider, or consultant.

What is the Design Research Plan Template?

The Design Research Plan Template includes space for organizations to document a description of their solution and theory of change, their learning objectives and approach, and a timeline to carry out the work. As organizations complete design research activities, they can update their plan with their results and any adjustments they will make to their solutions based on their findings. This template is designed for periodic updates as the design research unfolds, from planning to conducting research to interpreting results. Although developed for initial work on designing solutions, organizations may also use this template if they plan to make significant adjustments to their existing solution based on emerging evidence from the M&E process.

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The solution

Summarize the solution in one page or less. Include the core components of the solution, the person or organization that delivers the solution, intended users of the solution, intended outcomes, and settings where the solution has been implemented already (if applicable).

Draft theory of change

If you have developed a theory of change, include that theory of change here. If you have not yet developed a theory of change, use the template in Figure 1 to create one. As you conduct design research activities, plan to revisit the theory of change and update it as needed based on your results and any adjustments you make to the solution.

Figure 1. Theory of Change Template

**Activities and strategies**

**Outputs**

**Outcomes**

**Short-term**

**What will the implementing organization do, and what resources will the implementing organization use?**

Describe the solution’s components and resources. List all the components that are essential to produce the outputs and achieve the outcomes that are included in the next two boxes.

**What will be produced as a direct result of the solution?**

Outputs are tangible, that is, things that are produced as a result of the activities and strategies. These might include products, trainings, people served, and so on. Think of outputs as prerequisites for the outcomes. If the outputs are not produced, outcomes are not likely to occur. Where possible, organize the activities, strategies, and outputs into categories, and align the outputs with the activities and strategies that produce them. This will make for easier reading.

**Long-term**

**What will success look like in the short term?**

Outcomes should be specific and measurable. The implementing organization should consider including short-term (intermediate) outcomes, as well as long-term outcomes or goals for the solution. If an outcome is important to the solution but will not be achieved during the study period, include the outcome in *italics.*

**What will success look like in the medium and long term?**



Design research

Table 1 will help you plan for your design research activities and synthesize findings. Use the table to name your learning objectives (Column 1) and specify your approach to answering each question (Column 2). After testing, concisely summarize what you learned (Column 3) and document your next steps (Column 4). Design research questions include those that measure the [usability, usefulness, and utilization of the solution](https://www.mathematica.org/publications/guide-to-measuring-implementation-the-3us-usability-usefulness-utilization) for the community in focus. A fictitious example row is included for reference. After you review the example row, remove the gray, italicized text and replace with your own research questions. Feel free to add new rows if needed at the start or if new questions arise during this process.

Table 1. Design research questions, approach, findings, and next steps

| Planned research questions and approach | | Findings and next steps | |
| --- | --- | --- | --- |
| (1) | (2) | 3 | 4 |
| Learning objective:  What do you hope to learn from your design testing? | Approach:  What type of feedback and information will you collect? From whom? How? When? | Results:  What did you learn from analyzing your data? | Next steps:  What adjustments, if any, will you make to your solution? When? |
| **Illustrative example, delete after use.**  To what extent do students in the communities in focus find WriteBetter easy to use? | **Illustrative example, delete after use.**  ***What and who:*** We will conduct virtual think-alouds via screen share with six students from School A. The sample of students is aligned with the communities in focus for the project, as well as the demographic characteristics of the students in the school. (In School A, 86 percent of students are Hispanic; among the six students participating in the think-aloud, five are Hispanic.)  ***How:*** We will use a brief discussion protocol to guide the students through the writing activity and feedback summary features of WriteBetter and collect their feedback about the features.  ***When:*** The sessions are scheduled for February 2023. | **Illustrative example, delete after use.**  Half of the students (three of six) generally found WriteBetter easy to use, but half of them raised questions that signaled they could not easily use it without instruction. Students asked questions about how to get feedback, what the different colors of feedback meant, and which feedback to pay attention to. Also, most students did not access the learning modules without being prompted, but they were able to do so easily when asked. | **Illustrative example, delete after use.**  We plan to move the location and increase the size of the “get feedback” button. We will also put the learning module links in bold font and add a brief demo of the feature to the intro webinar so teachers can orient students to it. We’ll complete these changes in March 2023. We will also add a legend with definitions for the feedback colors, and we will modify the interface so that only one piece of feedback shows up at a time. These changes will be completed in April 2023. We have also asked School A if we can conduct another set of think-alouds in April or May. |
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Timeline

This section presents the key design research activities, the timeline for each activity, the intended completion date, and the person or organization responsible for the task (Table 2). Example activities are included in gray, for reference. As you approach scheduling your research, think about the time you will need to finalize or refine the solution and any steps that might need to occur before that can happen. Additional considerations might include the academic calendar and approval by an institutional review board, if needed.

Table 2. Milestones and timeline

| Activity | Timeline | Completion date | Responsibility |
| --- | --- | --- | --- |
| Develop a plan and timeline for design research activities and reporting | [Date range] | [Date] | [Person or organization] |
| Conduct data collection | [Date range] | [Date] | [Person or organization] |
| Analyze data | [Date range] | [Date] | [Person or organization] |
| Report findings and update theory of change | [Date range] | [Date] | [Person or organization] |
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References

Include references cited in the main body, as needed.