

Theory of Action, Logic Model, & Evaluation Design Template

This resource is designed to help states develop theories of action to specify how a program or initiative will promote student-centered learning initiatives.

What is a theory of action?

A theory of action is a hypothesis about how a system produces desired outcomes. At a minimum, a theory of action should have three parts: (1) desired outcomes, (2) resources or inputs, and (3) mechanisms – also known as the activities and outputs - that are expected to produce the desired outputs and outcomes. Each one of these parts can be partitioned further or labeled differently. For example, a theory of action might partition desired outcomes into shorter-term and longer-term outcomes. Or it might make a distinction between “outcomes” and “goals” or between “outcomes” and “impacts.” Some theories of action separate inputs into (human) agents and (material) resources. Similarly, a theory of action focusing on a particular strategy for achieving the desired outcomes might label its mechanisms as “strategies” or “actions.”

These variations do not change the basic structure of a theory of action. However, they result in varying foci and degrees of specificity in different theories of action.

What is the role of assessment in a theory of action?

Outside the theory of action. Assessment program sponsors often develop theories of action to situate the role of assessment in an educational system. In most systems, assessments play a dual role. The first, most essential role is to ascertain that specific desired outcomes have come about – for example, that students have reached proficiency on academic content standards. In an important sense, this “evidentiary” role places assessment *outside* the theory of action. Here, the assessment is part of an *evidence model* for testing the theory of action. *For example, a state’s end-of-year summative assessment is often used as the primary long-term outcome measure of student proficiency in a theory of action.*

Inside the theory of action. Educational assessments are rarely solely components of the evidence model – they are also active parts of the theory of action. If the answer to the question, “Does this assessment play a role in bringing about the desired outcomes?” is *yes*, then assessment is also *within* the theory of action. Assessment is typically a resource or activity supporting specific outputs and outcomes.

Direct and indirect effects. Assessments can operate in two different ways within a theory of action. Haertel (2013) distinguished between the direct effects of assessment and its indirect effects. Both effects may be present in a theory of action that includes assessment. Direct effects are those that depend on *scores or score reports*. For example, an assessment score might be used for placement in special programs. So a desired direct effect (i.e., an output) of that assessment is better allocation of students to instructional settings.

Why develop a theory of action? Who uses it? For what?



The main reason to develop a theory of action is to articulate how a program/initiative is intended to work for various audiences (including system participants). The theory of action can also serve as a roadmap to support the design and implementation of clearly specified end goals. A theory of action is also a *theory*, which means that it can be tested. Evaluating a system often begins with understanding the system's theory of action. Potential negative consequences can be identified through a theory of action, allowing for mitigation. Finally, a theory of action can help focus system participants' efforts on select aspects of the system, such as the desired outcomes.

How to develop a theory of action and logic model?

There are several ways to design a theory of action. Here, we present an approach synthesized from a combination of resources provided by the Center for Assessment (Landl, Evans, & Dadey, 2020) and the Department of Education (Shakman & Rodriguez, 2015). This approach uses a series of guiding questions to design a theory of action. It also lays the groundwork for identifying data collection methods to determine for whom, how, and under what conditions the hypothesized theory of action is working. However, a theory of action may not be enough. Many programs also require the development of a *logic model* (see D'Brot's overview on logic models, [2019](#), and the Kellogg Logic Model Development Guide, [2004](#)). Typically, a theory of action will outline the program's or initiative's major components and connections among them. A logic model extends that further to identify the specific activities, resources, outputs, and outcomes associated with each component of the theory of action. Below, we present several questions to guide the development of a theory of action and logic model.

1. What is the problem we are trying to solve?

Understanding the problem is an essential first step in creating a theory of action. A well-defined problem anchors development activities, establishes clear direction, and galvanizes collective action toward a common set of goals and vision for student-centered learning.

2. What are the system's intended goals or outcomes?

Long-term desired outcomes are the high-level articulation of what the system is intended to accomplish and are the driving force behind most design decisions. These outcomes provide the ultimate vision for the program and may require the program to be in place for a substantial period. These outcomes answer the question, "How will we know when the system is working as intended?" You can also think of them as *impacts* of your reform efforts. In the context of educational reform, long-term outcomes typically focus on direct changes observed among students, teachers, or students within classrooms.

Short-term desired outcomes answer the question, "What changes do you expect the reform to bring about in the short term?" Short-term changes often occur when one level is removed from the activities and outputs. For example, short-term outcomes in a state department-directed initiative typically emerge at a district level, with mid-and long-term outcomes occurring at a school, classroom, or student level.

Medium-term desired outcomes answer the question, “What changes do you expect the reform to bring about after the initial outcomes?” These are often at the school level to support classroom and student changes.

3. What activities (e.g., strategies and components) need to be in place to support attaining those outcomes?

Activities are the program components, or initiatives, for achieving a given set of outcomes. The activities represent an inventory of all the strategies and activities designed to produce a set of outputs and eventually achieve desired outcomes. Two critical questions to ask when specifying program activities include:

- What is the appropriate sequence or order of these activities
- Are there certain activities that, taken together, add up to a kind of overall strategy? Do certain activities bundle or cluster together?

Bundling and sequencing activities into more comprehensive strategies within a theory of action facilitate the implementation planning process. When activities are clearly bundled and sequenced, organization leaders who manage the development process will find it easier to assign activities to the appropriate departmental teams at the appropriate time.

4. What outputs (i.e., what the activities will produce immediately) will be produced from these activities? *Note that outputs are often, but not always, products of an initial set of activities.*

Outputs come between activities and outcomes, representing what is *initially* produced from a set of activities. Program outputs frequently represent tangible products; however, they can also represent secondary actions or latent knowledge and skills that emerge from initial activities.

For example, outputs could be a new model curriculum that school district leaders develop for districtwide use. In this case, the initial steps that district leaders take to create the model curriculum are the activities, and the curriculum and supporting materials are the outputs. As another example, a district may decide to hire instructional coaches to support better teacher practice. A teacher’s new skills and practices from coaching activities could represent critical outputs. Changes in student behaviors resulting from the teacher applying those new skills and practices would be the outcomes.

5. What resources/inputs could support the planned activities?

Resources include both the material and the intangible contributions that are available or could reasonably be expected to address the problem. Common resources include money/funding sources (e.g., grant funds), materials and equipment, people, time, and external partners.

After generating ideas to answer the questions above, a team can translate these ideas into a theory of action. A theory of action sequentially depicts how program resources/inputs activate a chain of events that solve a problem and achieve a given set of outcomes. Use the template above (page 1) to create a theory of action that illustrates how your state intends to achieve stated goals and outcomes.

How do we know that the program is working?

After developing a well-specified theory of action and a detailed logic model, most of the work to create a robust evaluation plan is in place. It is essential to determine whether you will be evaluating the program's outcomes or if you are trying to evaluate the program itself to improve its implementation.

What is program evaluation?

Program evaluation is a systematic method for collecting, analyzing, and using information to answer questions about projects, policies, and programs, particularly their effectiveness and efficiency (Shackman, [2018](#)). There are different types of program evaluation, but for our purposes, we will focus on four of them:

- **Formative evaluation:** Evaluation to improve the design, development, or implementation of a program or effort.
- **Summative evaluation:** Evaluation intended to make a retrospective judgment about a program or effort.
- **Process evaluation:** Evaluation focused on how well the program has been implemented and whether the program's procedures were effective.
- **Impact evaluation:** Evaluation that seeks to understand the long-term impact of a program by understanding whether the program brought about sustained changes.

Each of these can be used for specific evaluation purposes. Still, it is perhaps most important to discern between those evaluation efforts focused on the outcomes of a program vs. those evaluations that help us monitor the implementation or the improvement of a program. Ultimately, evaluations will attend to program outcomes. Outcomes are simply the specific changes in program participants' behavior, knowledge, skills, status, and level of functioning that you expect as a result of the program.

How do you conduct an evaluation?

Clearly defining the theory of action and program logic are two of the most critical steps in developing an evaluation plan. The more detailed a logic model, the clearer the evidence for defining program success. It will be essential to ensure the proper evidence is aligned with the program's resources, outputs, short-, mi-, and long-term outcomes. As the grain size increases (e.g., moving from outputs to short-term outcomes, from short-term outcomes to long-term outcomes), you may need more evidence to corroborate assumptions or initial findings. A robust evaluation is based on a solid plan and data elements or indicators of proof defined a priori. These indicators inform what evidence should be collected, documented, and used to interpret.

Most evaluations should be guided by specific program evaluation questions, similar to how research questions drive a research study. However, a general template for conducting an evaluation relies on an explicit theory of action and a well-described program. It includes the following steps: (1) clarify program objectives and goals, (2) develop evaluation questions, (3) specify methodology and develop tools, and (4) define the timeline and conduct the evaluation. The table below highlights the connection between defining the program logic and identifying what can be evaluated.

Table 1. Evaluation Planning

| Program Logic Area | Description | Evaluation Targets (Adapted from Kellogg, 2004) |
|---------------------------|---|---|
| Resources/ Inputs | What resources are needed to support the planned activities? | List the leading indicators that could be used to determine whether resource and minimum activity requirements have been achieved. These can help you understand whether the activity can be enacted. |
| Activities/ Strategies | What activities need to be in place to support the outcomes? | Activities are the processes, tools, events, technology, and actions that are an intentional part of the program. Outputs are direct evidence of the activity being completed. |
| Outputs | What outputs will be produced from these activities? | Are outputs being produced as expected? These are not the same as outcomes. They help you understand if the actual activity or strategy has been completed. |
| Short-Term* Outcomes | What changes do you expect the reform to bring about in the short term? | Short-term outcomes are specific changes in attitudes, behaviors, knowledge, skills, status, or level of functioning expected to result from program activities. These usually are expressed at an individual level among program participants and are the earliest outcomes. |
| Mid-Term* Outcomes | What changes do you expect the reform to bring about in the mid-term? | Mid-term outcomes precede long-term outcomes but follow short-term outcomes. Mid-term outcomes are also specific changes in attitudes, behaviors, knowledge, skills, status, or level of functioning expected to result from program activities. |
| Long-Term* Outcomes | What are the long-term impacts you expect to observe? | Impacts are organizational, community, or system-level changes expected to result from program activities, including improved conditions, increased capacity, and changes in the policy arena. |

*The time boundary for short-, mid-, and long-term outcomes varies by industry and project. While some resources suggest that short-term outcomes typically take 1-3 years and long-term outcomes take more than seven years, the educational field has moved toward expecting faster results. Most importantly, organize outcomes so that they are temporally coherent.