



A Theory of Action to Guide the Design and Evaluation of State Innovative Assessment and Accountability Systems

A “theory of action” is a critical tool for the design and evaluation of policy. Often referred to as logic models, theories of action are schematic representations of the logical argument connecting the long- and short-term outcomes of a policy initiative with the processes and mechanisms intended to bring about these outcomes. It clarifies alternatives and potentially competing claims about how a policy initiative should work. Policymakers and designers must explicitly lay out how the proposed design choices are intended to accomplish the goals of the program. In other words, why is the pilot designed in the way it is to fulfill the intended goals? In addition to the why, policymakers must also describe the **how**, such as **how** will involving local educators in the design of the assessment system influence teacher knowledge and student learning? Having to articulate both the aims and mechanisms of the program will expose proposed policies for evaluating schools that may be untenable and will also shed light on some fruitful means of meeting the major policy goals. Because of the importance of theories of action to the development of an innovative assessment, this brief builds on and expands the discussion of theories of action presented in our first brief in this series.¹

A theory of action is a useful tool for connecting the vision to the operational innovative assessment and accountability system as highlighted in the following figure.

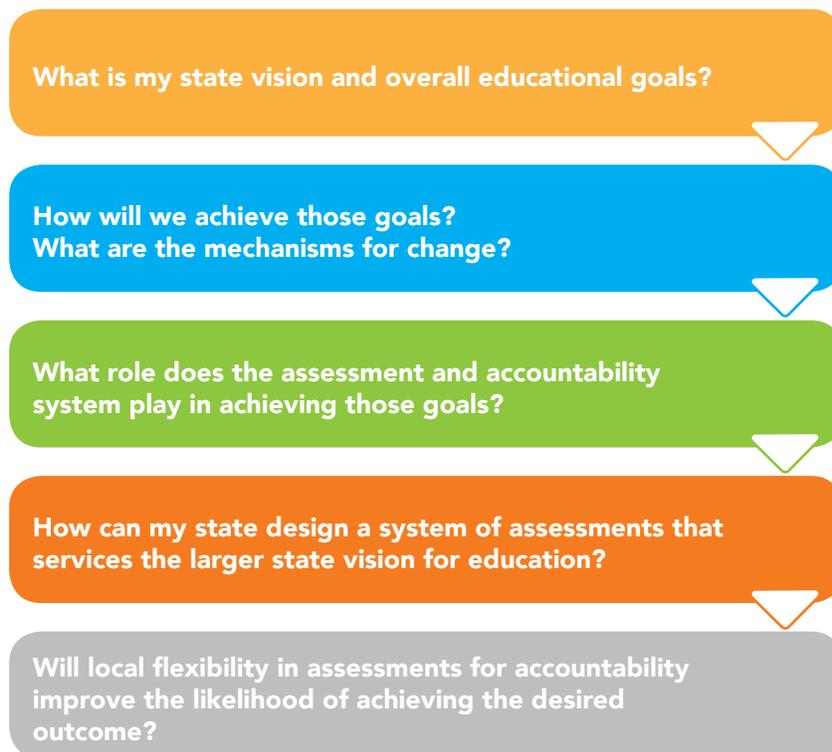


Figure 1. Framing a theory of action for innovative assessment systems.

¹ Marion, S.F., Pace, L., Williams, M., & Lyons, S. (2016). Project Narrative: Creating a State Vision to Support the Design and Implementation of An Innovative Assessment and Accountability System. www.innovativeassessments.org.

States must explicitly articulate the crucial link between the purposes and uses of the assessment results in the design of their innovative assessment and accountability systems. They must also describe how those results will lead to what the innovative pilot is ultimately designed to achieve. When outlining the theory of action, the design team needs to ensure that connections among various aspects of the assessment system are not simply belief statements, but are supported by research, ideally, or at least best practices if research is not available. Given the innovative nature of the assessment and accountability systems likely to be proposed under the Demonstration Authority, the links between the elements of the theory of action should additionally serve as testable hypotheses that can be verified with evidence through the implementation of the pilot. This accumulation of evidence would support the on-going validation of the assessment and accountability system.

Some general considerations for designing a theory of action for an innovative pilot include:

- a. A description of how each component of the proposed innovative pilot is clearly and convincingly related to the other components in the system (e.g., how the components will work together to achieve the desired outcome);
- b. An explanation of the role that the assessment results and accountability indicators will play in the system and why the particular indicators were selected;
- c. A description of how the assessment results will be incorporated into a coherent educational system (i.e., a system that includes standards, assessments, curriculum, instruction, and professional development);
- d. A rationale for how the innovative pilot as a whole will improve student achievement and college- and career-readiness (or other relevant goals);
- e. An explanation of how and why the capacity of participating educators and organizations will improve; and
- f. A plan for how and when the system will be expanded to include all districts in the state.

One of the benefits of designing a policy initiative by starting with a theory of action is that potentially unintended, negative consequences may be identified and mitigated ahead of time by checking the systemic assumptions that must hold in order for the system to function as intended. This check on the logic of the underlying assumptions of the various proposals will serve as an important touchstone during the design process. Again, a theory of action is not just a bunch of pretty shapes and arrows. It must be an empirically and logically based argument that outlines how the specific proposed system will fulfill the stated.

Developing a Theory of Action

There is no single approach for creating a theory of action, but states may find the following steps useful.

- 1 — Clearly describe the **goals** of the innovative pilot. It is quite likely that there will be multiple goals for the system, but the state and participating districts should try to narrow these down to the highest priority and highest consensus goals. These goals will certainly include the specific outcomes (see step #3), but will also include broader goals for the educational system. As we discussed in our Project Narrative brief, these goals need to focus on improving student learning as well as other goals relevant outcomes. The remaining steps are focused on outlining how the various designs and interventions will help realize these goals.
- 2 — The next step is to articulate the **purposes** and intended **uses** of the results that emerge from the assessment system. Being as clear as possible about the goals, purposes, and intended uses

up front helps provide the foundation for the theory of action. (The purposes and uses of the system will be linked directly to attainment of the goals of the system through steps 3–7.) For example, the assessment results from some of the assessments in the system are intended to be used to provide instructionally-actionable information to teachers and students, while other assessments can be used to support accountability determinations.

- 3 The state and pilot districts should come to a rough agreement on the specific intended **outcomes** of the system. For example, a likely intended common outcome for most innovative pilots will be to increase student engagement and ultimately the rates of college and career readiness (CCR) for all students. This outcome or outcomes will be closely related to the goals for the system.
- 4 The next step is to start laying out the **mediating outcomes** necessary to achieve the ultimate outcome(s). Using the example of improving the rates of CCR for all students, some important mediating variables could include such things as “teachers will engage students in meaningful learning activities,” “students will learn to direct or at least co-direct their own learning,” “student growth trajectories will improve over time,” and “teachers (after receiving useful assessment information) will improve their instruction and learning activities.” These are just a few of many examples and the reader should note that some of these would be influenced by prior mediating outcomes and each would need to be expanded by clarifying the mechanisms (see step #7).
- 5 We have found it helpful to create an initial “high-level” (large grain size) theory of action as a first step in pulling together the results of steps 1-4 (see Figure 2). This lays out the big picture components and illustrates how these major components are intended to relate to one another.
- 6 Once the high level theory of action is created, design teams should add enough details to articulate how these major components relate to the minor components. At a certain point, the design team will need to decide the level of detail that can be represented in a single diagram, if this is done pictorially, or in a single set of written steps or statements.
- 7 The final step involves “zooming in” on several key components of the theory of action to add the detail necessary to support the innovative pilot design and the validity argument. This step is crucial because this is where the design teams have the opportunity to specify the hypothesized mechanisms by which the intended intermediate and final outcomes are thought to occur. Through these mechanisms, the **uses** of the innovative assessment results will be linked to attainment of the **goals**. For example, a theory of action might suggest that providing information at the competency-level will lead to improved student learning. In this case, the state/district design team, when working at this detailed level, should be expected to hypothesize the mechanisms or processes by which the data from the innovative assessment system will lead to better learning outcomes for students such as the development of intervention programs for students who struggle to attain particular competencies. The specification of this hypothesized mechanism then becomes a claim to be included in the validity argument.
- 8 Once the chain of logic for attaining system goals is clearly specified, the underlying assumptions which must hold in order for the system to function as intended should be articulated. To continue the example from step #7, if reporting competency-based assessment scores is intended to lead to improved student achievement through the use of targeted interventions, the assumption that the intervention is effective must be upheld. Assumptions such as this must be clearly stated in order to identify the conditions under which the goals are most likely to be attained. Through this process of articulating assumptions, we will find that some assumptions are more likely to be violated than others. In the event we identify an assumption that is either likely to be violated, or if violated, consequences would be dire, this will signal a need to potentially revisit the design of the system and revise the theory of action.

We revisit the example of a high-level theory of action for an innovative pilot system originally presented in the Project Narrative brief (see Figure 3). As seen in the figure below, the “focused and sustained professional development” is the mediating mechanism through which teachers get feedback on their practices and learn how to translate assessment information into useable instructional strategies. The assumptions that must hold for this to be true would be added alongside the connecting arrows.

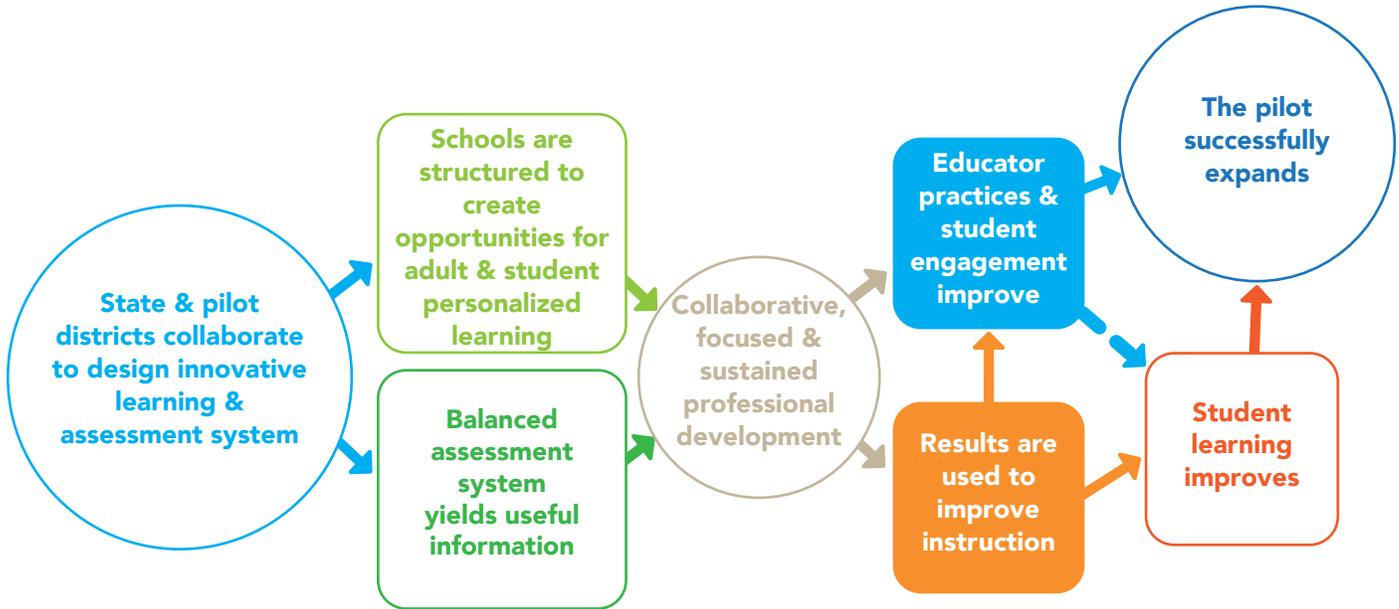


Figure 2. A theory of action for improving practices and learning

Coming in for a Landing

The 30,000 foot view is helpful for beginning to outline the system and to help align stakeholders behind the vision. However, for the theory of action to truly guide the design and evaluation of the innovative system, we eventually have to land the plane or at least move down from 30,000 to about 1,000 feet. We unpack just one aspect of the theory of action from above—the shaded boxes—to illustrate the various considerations for state leaders and partners as they engage in this work. The shaded components of the theory of action from Figure 2 suggest that the assessment results are used to improve instruction, which then leads to improvements in educator practices and student engagement. Moving from assessment results to improved practices is no more than a leap of faith unless the designer articulates critical processes and activities to realize these intermediary outcomes. In Figure 3 below, we provide an example of how state leaders and partners could begin unpacking these steps.

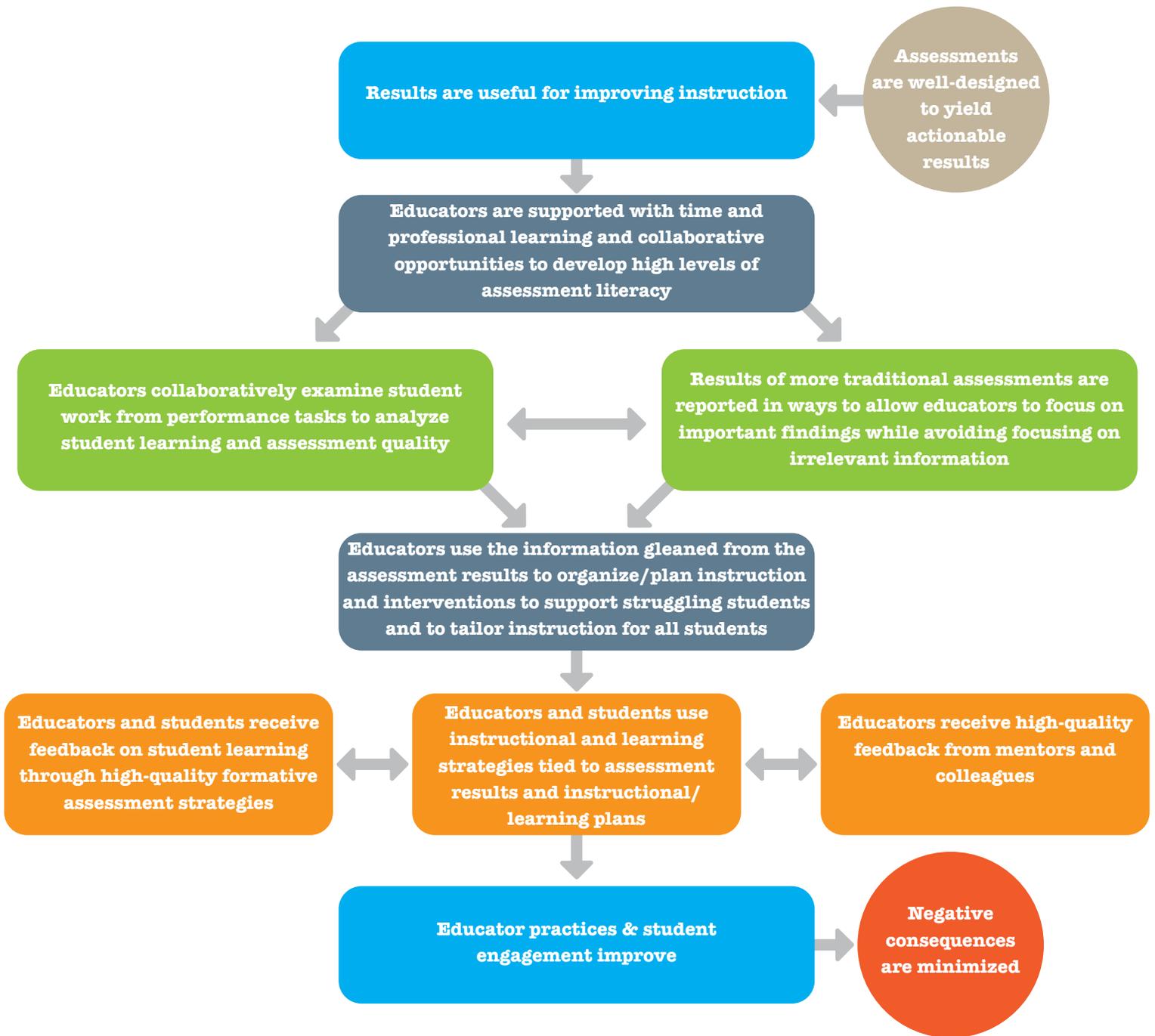


Figure 3. Expanded view of the theory of action.

As can be seen in Figure 3, there are many more details that need to be added to fully flesh out a theory of action. Once the state leaders and partners in the pilot come to agreement on such an expanded theory of action, the project leaders would develop an implementation plan to guide the pilot activities. The theory of action would also be used to guide the formative evaluation so that the pilot can be supported by a continuous improvement process.

Identifying Unintended Negative Consequences

Even the best laid plans can go awry, especially in complex contexts that characterize educational systems. Educator evaluators and policy analysts have learned the importance of attending to and guarding against unintended negative consequences. A theory of action can help reveal potential negative consequences by checking the systemic assumptions that must hold in order for the system to function as intended. Additionally, it lays the foundation for continuously improving, refining, and calibrating the system. Identifying and mitigating negative unintended consequences can be addressed through the theory of action process by asking the following questions:

- What is the likelihood this assumption, process, or mechanism will be violated?
- What are the consequences if this assumption does not hold?
- What can the state (or project leader) do pre-emptively to ensure this assumption will hold?

This does not mean that all unintended negative consequences will be averted, but developing this type of mindset will enable project leaders to constantly be on guard against unfortunate outcomes of their efforts.

Summary

A theory of action requires careful and deliberative thought, but the time spent upfront can be invaluable in guiding the design, implementation, and evaluation of the policy initiative. We hope this brief will serve as a useful guide for beginning this important work.