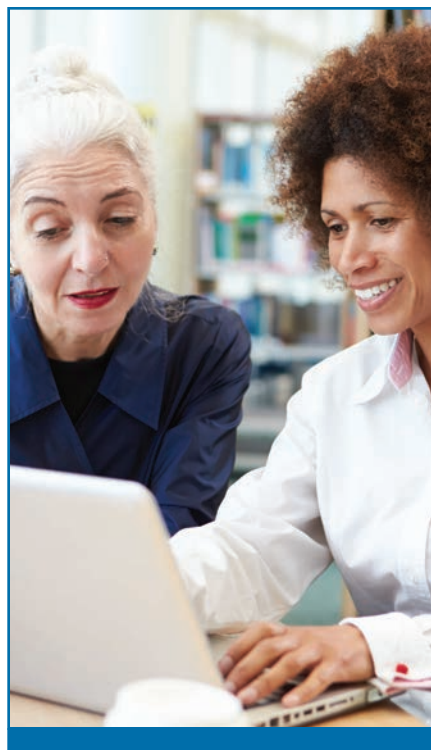# Logic Models for Selecting, Designing, and Implementing Evidence-Based School Leadership Interventions

Companion Guide to
School Leadership Interventions Under the Every Student Succeeds Act

LINDSAY DAUGHERTY, REBECCA HERMAN, AND FATIH UNLU

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Preface

Introduction

Why focus on school leadership?

Research indicates that principals play a critical role in the educational achievement of students (Branch, Hanushek, and Rivkin, 2012; Grissom, Kalogrides, and Loeb, 2015; Leithwood et al., 2004). Principals also play a role in driving key teacher outcomes (Boyd et al., 2011; Grissom, 2011; Ladd, 2011; Loeb, Kalogrides, and Béteille, 2012). Based on this evidence, states and districts have made efforts to build leadership capacity, a key element of many educational reforms.

Whom is this guide for?

This guide is for state and district policymakers, as well as organizations involved in the design and delivery of leadership interventions.

Why use this guide?

The Every Student Succeeds Act (ESSA) provides avenues for funding leadership interventions, and ESSA requires that funded interventions be evidence-based.[1] According to ESSA, the minimum standards for an evidence-based intervention are that the intervention should be represented by a logic model, which (as defined in the U.S. Department of Education's nonregulatory guidance to ESSA) presents "a well-specified conceptual framework that identifies key components of the proposed process, product, strategy, or practice (i.e., the active 'ingredients' that are hypothesized to be

critical to achieving the relevant outcomes) and describes the relationships among the key components and outcomes, theoretically and operationally" (U.S. Department of Education, 2016). This is not only the law; it also makes sense. To maximize the impact of educational investments, education policymakers should have a clear vision of how an investment is expected to change education practices and lead to better student outcomes. Unfortunately, until now, education policymakers have not had a resource that systematically shows the path from investment to impact for school leadership improvement interventions.

To support states and districts in identifying the evidence base for school leadership interventions, we have produced a series of logic models that present key components of six types of school leadership interventions, and the ways in which these components are expected to lead to better student outcomes. State and district education policymakers, as well as intervention designers and implementers, can use this guide to

- understand the theory behind various ways in which leadership intervention types work to improve student outcomes
- identify the key components of evidence-based programs to inform the design, adoption, or refinement of aligned interventions
- develop or refine logic models and evaluation measures.

What is in this guide?

This document presents a step-by-step guide for understanding how logic models work and how such models can describe common school leadership interventions to establish an evidence-based theory of change. The guide is organized into the following sections:

"Road Map" to Logic Model Components: We start with a "road map" that discusses the various aspects of a logic model and describes how the sections of the guide can be used to build logic models.

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[1] ESSA defines four tiers of evidence, in order of rigor, for judging whether an activity is evidence-based. While the first three tiers describe required levels of evidence for impact, tier IV instead requires a research-based rationale that the intervention will have the desired impact, coupled with ongoing evaluation of the intervention to build an evidence base on the impact of that intervention. The companion report to this tool, *School Leadership Interventions Under the Every Student Succeeds Act: Evidence Review: Updated and Expanded,* provides a more thorough discussion of ESSA requirements and a detailed review of studies and programs that currently meet these evidence requirements.

Six Types of Leadership Interventions and the Problems They Address: Next, we briefly review six common types of school leadership interventions: principal preparation programs; strategic staff management (recruitment, selection, and placement); professional learning; leader evaluation; working conditions; and school improvement. We also describe the problem each intervention type intends to address. This is an important step, as different types of school leadership interventions address different challenges, and selecting the right intervention will depend on where in the educational-system problems are arising.

The Link from Leadership Interventions to Student Outcomes: In this section, we provide an illustration of the way that leadership interventions commonly work to improve outcomes, specifically principal competencies, school-level outcomes, and finally student outcomes.

Logic Models: The next section presents individual logic models for each of the six intervention types, with a focus on activities and outputs. We describe promising practices and provide samples of indicators that can be used to evaluate whether interventions are being implemented as planned.

A Word About Resources: Finally, we address the issue of what resources may be needed for leadership interventions. In environments where resources are particularly constrained, it may be useful to identify available resources before selecting an intervention or developing a logic model to guide your approach.

Methods for creating logic models

To develop the six logic models, we used program documentation and research literature for specific leadership intervention programs to identify or develop program-specific logic models, and then aggregated these program-specific

logic models into logic models that describe the range of programs under an intervention type. We used the following four-step process:

1) *Identified programs for each intervention type:* First, we identified a set of programs we could analyze to build the logic models. We started with the list of programs that met ESSA evidence standards in Herman et al. (2017). We supplemented these programs with others highlighted in reviews of promising leadership programs (e.g., George W. Bush Institute), as well as those recommended by a panel of 12 experts, including six RAND researchers and six external experts in leadership. To include an intervention's information in this process, we required at least one peer-reviewed study with positive outcomes and/or public documentation of evidence-based theory.[2] We did not aim to identify every evidence-based program for our six intervention types, but we did aim to identify a sufficient number of programs to capture the range of approaches in an area. For example, we wanted to ensure that we had a variety of providers represented for principal preparation programs, including university providers, university/district partnerships, and alternative providers. We classified our lists of programs according to these key characteristics and continued to add programs until we had at least two programs of each preidentified category. The table on page 6 summarizes the total number of programs identified by intervention type.[3]

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[2] We did not limit this analysis to the interventions found to meet ESSA evidence standards in *School Leadership Interventions Under the Every Student Succeeds Act*. Some programs did not have visual logic models that allowed them to meet Tier IV evidence standards, but did have sufficient description of theory in program documentation to create a logic model. It was important to cast a broad net so we would not systematically exclude promising types of interventions that have not yet been proven.

[3] Many of the programs reviewed were implemented and evaluated in large urban school districts, and generalizability of these evidence-based practices to other settings is unknown. Further, information on the study settings and the target setting for interventions was not always available. Users should consider, as much as possible, whether a given intervention is well suited for and effective in a context like their own.

2) *Collected or developed program-specific logic models:* We searched public documentation to describe programs and develop program-specific logic models, including research studies, program websites, user manuals, and other public documentation available online. Programs without sufficient information to develop logic models were excluded. Total counts of logic models included 29 for principal preparation; 11 for professional learning; eight each for leader evaluation, working conditions, and school improvement; and three for strategic staff management.

3) *Aggregated program-specific logic models:* We identified the features of logic models across programs and determined which components were found across all programs and which components were found only in some programs. We gathered additional information on implementation, outputs, and outcome measures to add detail to the logic models.

4) *Gathered expert feedback and refined logic models:* Internal leadership experts provided feedback on several drafts of each logic model, and the logic models were refined in response to this feedback.

Most of the information in the document comes from analysis of program data, with a few exceptions. RAND largely generated the sample output measures and resource questions, as opposed to drawing them from program materials.

Programs Reviewed by Intervention Type

	RAND ESSA Report	Other Literature	Expert Recommendation	Total
Principal preparation programs	9	7	13	29
Strategic staff management	2	1	0	3
Professional learning	5	2	4	11
Leader evaluation systems	2	4	2	8
Working conditions	3	4	1	8
School improvement	2	0	6	8

"Road Map" to Logic Model Components

On this page, we provide a "road map" to the different parts of a logic model, including what information we have developed for each component and how that information can be used to build or refine your own logic model.

Problem Statement "What issue am I addressing?"	In this document, we describe each of our six intervention types according to the problem they aim to address (see pages 9 and 10). How to use it: Use these problem statements to help you focus on logic models related to the types of interventions that most directly apply to your needs and priorities.

Resources "What do I need?"	**Activities** "What do I do?"	**Outputs** "What happens immediately?"	**Outcomes** "What are my goals?"
In this document, we identify a list of resource types and some questions about needed resources for states and districts to consider asking (see pages 36 and 37). How to use it: When identifying an intervention and the primary activities, use our guiding questions to identify resources. *If sufficient resources are not available, consider other intervention types.*	In the logic models, we identify activities associated with each of the six categories of leadership interventions and report additional detail on how specific interventions we reviewed undertake these activities (see pages 12 to 35). How to use it: Determine whether your current or future intervention has the activities commonly found in evidence-based programs.	In the logic models, we identify outputs—or the immediate things that should happen if the intervention is implemented effectively—for each of the six intervention categories, and indicate possible indicators that can be used to measure implementation success (see pages 12 to 35). How to use it: Identify the key outputs that you might want to examine and measure to determine whether the intervention is being implemented properly.	In this document, we identify a number of common short-, medium-, and long-term outcomes for school leadership interventions (see page 11). How to use it: Understand how leadership interventions work to achieve improved outcomes for students, identify the principal competencies the current or future intervention aims to affect, and align the design of the intervention with outcomes.

Additional considerations in using this guide

Logic modeling often works best when done backward. Many logic model guides suggest starting logic models at the end (outcomes) and moving backward (to resources), so we suggest using a similar approach.[4] After identifying which intervention type(s) are best suited for the needs of your state or district, start by identifying the ultimate outcomes you aim to affect. Then identify which intermediate- and short-term outcomes are required to achieve the longer-term impacts. Next determine the primary activities that the intervention will consist of, and the immediate outputs associated with those activities. Finally, list the resources needed to carry out the activities, and determine whether these resources can be mobilized to ensure successful implementation.

Logic models may be integrated when describing interventions that include more than one intervention type. While we present separate logic models for each of our six intervention types, some interventions combine aspects from multiple intervention types into one integrated and coordinated set of reforms. For these types of interventions, states and districts may find it useful to create an integrated logic model that covers the full range of intervention components to ensure that implementation and evaluation are coordinated across the full intervention. There may also be benefits to fleshing out the specifics of the reforms through separate logic models for intervention subcomponents. For example, the Wallace Pipeline Project requires districts to reform aspects of principal preparation, strategic staffing, and leader evaluation. In designing a logic model for this type of multifaceted reform, one might first develop individual logic models for each of the three subcomponents, to fully unpack the model change process, and then eventually aggregate them into one large, integrated logic model to promote continuity across the full initiative. Alternatively, the integrated logic model could be developed first, followed by creation of more-detailed breakouts of the three subcomponents as needed.

Logic models should not be static. As the outcomes of interest shift and the intervention activities are refined, the logic model should be updated to reflect the current state of the interventions.

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[4] Logic model design guidance in this document was informed by other logic model resources, including Funnell and Rogers, 2011; Wyatt Knowlton and Phillips, 2013; McLaughlin and Jordan, 1999; and Shakman and Rodriguez, 2015.

Understanding Different Leadership Intervention Types

Next we describe six types of leadership interventions. We define leadership interventions broadly to include any deliberate effort to systematically improve leadership capacity in schools by altering programs, practices, or policies. Interventions can include specialized programs that target certain groups of principals or districtwide/statewide practices that affect all principals. Interventions can be developed in-house by states and districts, purchased from external organizations, or developed collaboratively. Choosing the right intervention type(s) includes understanding where the challenges are in the current pipeline and state/district environment, identifying the areas of the pipeline and environment where policymakers have the leverage to make change, and ensuring that the intervention can be designed and implemented to meet the goals of the state/district. In some cases, multiple intervention types may be combined, to be implemented together (see previous section).

Principal Preparation Programs

Problem: Many states and districts struggle with a shortage of new principals who possess competencies needed for effective leadership. While attending training programs, principal candidates often do not receive academic coursework and clinical experiences that adequately prepare them for leadership positions in real life. After graduation, new principals often do not receive sufficient support and mentoring tailored to their individual needs to guide them in the first few years in leadership positions.

Intervention: Principal preparation programs aim to prepare current and aspiring educators to become principals through training that combines high-quality classroom instruction and some type of school-based internship. These programs can lead to an advanced degree or certification. They may be provided by universities, districts, or independent organizations, or some combination of the three.

Strategic Staff Management (Recruitment, Selection, and Placement)

Problem: Many states and districts struggle to hire leaders who possess the competencies needed for effective leadership. In addition, school leaders may not be assigned to schools in an optimal way. High-needs schools, in particular, struggle to attract and retain effective leaders and replace ineffective leaders.

Intervention: Strategic staff management includes activities to improve recruitment and selection processes and the assignment of principals to schools. Recruitment and retention interventions may include, for example, communication strategies to broaden the candidate pool or specialized processes and tools to screen and evaluate candidates (e.g., performance-based interview tasks). Interventions may also attempt to place effective principals into specific schools (based on need or on principal-school match) and/or replace ineffective principals.

Professional Learning

Problem: The ongoing training, support, and professional development offered to principals may fail to meet the needs of all principals, especially early-career principals and those placed in the most challenging schools. The amount of professional learning offered may be insufficient, the content of professional learning may not necessarily be aligned with principal or school needs, and/or the delivery of content may not be effective.

Intervention: Professional learning interventions aim to provide to principals more effective support that is closely aligned with principal needs. Professional learning can include workshops (single sessions or a series), professional learning communities, and coaching/mentoring. These opportunities may be available throughout a principal's career, although they often are most intensive early in his or her career.

Leader Evaluation Systems

Problem: Districts often have limited information on the competencies and effectiveness of their school leaders, and principals often receive inadequate feedback on their abilities and progress. This can limit the ability of individual leaders to engage in professional growth and limit the ability of districts to assess leadership capacity and target efforts to improve capacity through other leadership interventions.

Intervention: Leader evaluation systems are a set of processes, tools, and metrics designed to evaluate principals' strengths and needs—for either accountability or developmental purposes. In theory and policy, these systems should be aligned with rigorous leadership standards (e.g., state standards or the Professional Standards for Educational Leaders [National Policy Board for Educational Administration, 2015]); draw on multiple perspectives (e.g., the principal's supervisor, teachers); and incorporate different types of evidence (e.g., student-achievement data, observations, surveys).

Working Conditions

Problem: Potentially effective principals may not be achieving their full potential due to unclear expectations, lack of incentives, limited autonomy, bureaucratic central office processes, or insufficient support from supervisors and other departments.

Intervention: The intervention aims to affect one or more aspects of the school leaders' working conditions. Examples include—but are not limited to—providing incentives to recruit and retain school leaders, autonomy so leaders can make decisions typically made at the district level, redesign of principal supervisor roles to be more supportive of principals, and shifts in central office structures, processes, and culture in support of principals.

School Improvement

Problem: School turnaround research repeatedly shows that an effective principal is at the core of every successful school turnaround; however, not every principal is well equipped to effectively lead such an effort.

Intervention: School improvement models aim to improve low-performing schools through multiple components (e.g., changes to the curriculum, instruction, staffing, management). Many models include school leadership as one of these components. The school leadership component may include extensive principal professional development, changing the role of the principal to focus more on instruction, replacing the principal, granting the principal greater control over school decisions, and many other strategies explored under the other types of school leadership interventions. The unique element of this type of intervention is that the school leadership piece is integrated into a larger, schoolwide set of reforms and cannot be examined in isolation.

The Link Between Leadership Interventions and Student Outcomes

Leadership interventions use different strategies to achieve a common set of outcomes.[5] While the ultimate goals of leadership interventions are to improve student outcomes, leaders must first improve the schools. Leadership interventions work to improve schools and students by improving the competencies of principals within schools. Principal competencies are a combination of the skills and abilities of principals and their behaviors, including where they focus time and effort. While this is not an exhaustive list, we provide examples of the outcomes mentioned by evidence-based leadership programs here.

	Short-term outcomes	Medium-term outcomes	Long-term outcomes
	Improved leadership capacity in the following competencies:	Improved schools in the following areas:	Increased student success in the following areas:
Leadership interventions →	• Sets directions, vision, and goals • Develops professional learning of staff • Manages instructional program • Manages school environment • Manages time strategically and effectively • Challenges status quo where it is ineffective • Uses theory, data, and evidence to drive practice • Interacts with external stakeholders • Communicates and connects effectively • Adapts to school needs • Inspires staff and promotes innovation	• Instructional quality • School culture/climate/environment • Retention of high-quality staff	• Student attendance • Student behavior • Student achievement • Graduation • College and career success

[5] Leadership interventions may aim to increase the impact of an individual principal (e.g., targeted professional development) or of the principal pipeline across a district or state (e.g., improving the percentage of principals who master competencies). At the program/district/state level, leadership interventions may aim to improve the distribution of outcomes, such as ensuring that certain schools are staffed with principals who have mastered competencies, and achieving greater equity in outcomes for students.

Logic Model—Principal Preparation Programs

Logic Model—Principal Preparation Programs

The problem: Many states and districts struggle with the shortage of new principals who possess competencies needed for effective leadership. While attending training programs, principal candidates often do not receive academic coursework and clinical experiences that adequately prepare them for leadership positions in real life. After graduation, new principals often do not receive sufficient support and mentoring tailored to their individual needs to guide them in the first few years in leadership positions.

Resources	Activities	Outputs	Outcomes
Human resources Facilities Funding Materials	● Develop/select research-based standards and curriculum for preparing effective principals ▷ *Recruit and select highly qualified principal candidates* ● Provide principal candidates with adequate training that consists of coursework/academic instruction and clinical (i.e., on-the-job) learning opportunities ▷ *Place program graduates in leadership positions* ▷ *Provide graduates in leadership positions with constructive feedback, coaching, and ongoing support*	○ Preparation program standards and structures are research based and aligned with district priorities ▷ *Programs enroll highly qualified principal candidates* ○ Principal candidates receive academic training focused on areas and competencies emphasized by research and districts ○ Principal candidates gain on-the-job real-world experience ▷ *Program graduates are well suited for leadership positions* ▷ *Program graduates in leadership positions receive coaching and support tailored to their individual needs*	Improved principal competencies ↓ Improved schools ↓ Improved student achievement

Legend:

● All reviewed programs undertook this activity

▷ *Some reviewed programs undertook this activity*

○ All reviewed programs mentioned this output

▷ *Some reviewed programs mentioned this output*

Logic model—Principal preparation programs: Details on activities reviewed in evidence-based programs

Resources	Activities	Outputs	Outcomes

Resources

- ● All reviewed programs undertook this activity
- ▶ *Some reviewed programs undertook this activity*

Activities

● Develop/select research-based standards and curriculum for preparing effective principals

- Preparation programs (often in coordination with district partners) developed or selected curricula and program structures around research-based standards and competencies for effective leadership.

▶ *Recruit and select highly qualified principal candidates*

- *In many university-district partnerships, districts were involved in outreach, recruitment, and selection of highly qualified applicants who possessed leadership competencies.*
- *Some programs used a centralized process that utilized selection criteria developed to choose the most-qualified candidates from the pool of applicants.*

● Provide principal candidates with adequate training that consists of coursework/academic instruction and clinical (i.e., on-the-job) learning opportunities

- Principal candidates were provided coursework and other forms of academic instruction (e.g., seminars and workshops) about school leadership that varied in delivery mechanism, length, and whether it led to a degree or certificate.
- Some clinical practices were implemented during the coursework phase, while some programs placed candidates in structured residency or apprenticeship components (e.g., as a district or school partner, being mentored by an experienced leader or principal, or being coached by program staff).
- Programs typically assessed leadership skills and competencies of principal candidates as they went through and before they completed the program.

▶ *Place program graduates in leadership positions*

- *Some programs endorsed graduates and helped them find leadership positions in partner districts.*

▶ *Provide graduates in leadership positions with constructive feedback, coaching, and ongoing support*

- *Some programs offered graduates continued support (mentoring and coaching) informed by assessment results and customized to their needs during the first few years on the job.*

Logic model—Principal preparation programs: Sample indicators to track progress on outputs

Resources	Activities	Outputs	Outcomes

Legend:
- ● All reviewed programs mentioned this output
- ▷ *Some reviewed programs mentioned this output*

Activities / Outputs:

● **Preparation program standards and structures are research-based and aligned with district priorities**
- Extent to which standards and structures of principal preparation programs are aligned with district priorities

▷ *Programs enroll highly qualified principal candidates*
- *Number of highly qualified applications received*
- *Rate of acceptance of highly qualified applicants*

● **Principal candidates receive academic training focused on areas and competencies emphasized by research and districts**
- Length and intensity of coursework or other type of academic instruction
- Extent to which coursework is high-quality and relevant for real-life leadership positions in districts and schools

● **Principal candidates gain on-the-job real-world experience**
- Length and intensity of residency, apprenticeship, or other clinical practices
- Proportion of principal candidates who reported receiving high-quality mentorship during clinical practice
- Extent to which short-term training or coursework is aligned with clinical experiences

▷ *Program graduates are well suited for leadership positions*
- *Percentage of program graduates placed in leadership positions in a particular time frame*
- *Extent to which program graduates' skills and training match with the needs of the leadership positions in which they were placed*

▷ *Program graduates in leadership positions receive coaching and support tailored to their individual needs*
- *Duration and frequency of coaching and support received by program graduates*
- *Type and focus of the feedback and coaching received by program graduates*
- *Extent to which coaching topics are aligned with areas of weakness*

Logic Model—Strategic Staff Management (Recruitment, Selection, and Placement)

Logic Model—Strategic Staff Management (Recruitment, Selection, and Placement)

The problem: Many states and districts struggle to hire leaders who possess the competencies needed for effective leadership. In addition, school leaders may not be assigned to schools in an optimal way. High-needs schools, in particular, struggle to attract and retain effective leaders and replace ineffective leaders.

Resources	Activities	Outputs	Outcomes
Human resources	▷ *Use long-term planning and broad recruitment to identify a large, high-quality candidate pool*	▷ *The candidate pool is of sufficient size and quality*	Improved principal competencies
Facilities	▷ *Use a rigorous, data-informed process to assess gaps in leadership, select, and place leaders*	▷ *Principals are well matched to schools*	↓
Funding	▷ *Use policies and incentives to support desired placement outcomes*	▷ *Placement and tracking processes provide information useful for leadership improvement*	Improved schools
Materials	▷ *Provide feedback to candidates on their strengths and weaknesses*	▷ *Principals are sufficiently prepared to lead schools*	↓
	▷ *Provide sufficient support around preparation, planning, and integration*	▷ *Schools experience minimal disruption around transitions*	Improved student achievement
	▷ *Replace ineffective principals with effective principals*		

Legend:
- ● All reviewed programs undertook this activity
- ▷ *Some reviewed programs undertook this activity*
- ● All reviewed programs mentioned this output
- ▷ *Some reviewed programs mentioned this output*

Logic model—Strategic staff management: Details on activities reviewed in evidence-based programs

Resources	Activities	Outputs	Outcomes

- All reviewed programs undertook this activity
- *Some reviewed programs undertook this activity*

▷ *Use long-term planning and broad recruitment to identify a large, high-quality candidate pool*

- Some programs created policies requiring projections of vacancies to facilitate long-term planning.
- Some programs developed ongoing processes for identifying, nominating, and developing aspiring leaders, some several years in advance of placement.

▷ *Use a rigorous, data-informed process to identify leadership gaps and inform selection, placement, and training of leaders*

- Many programs created leader tracking systems or used other strategies to systematically collect and assess data on aspiring and current leaders around training, experience, performance, and competencies. These data were used to identify gaps in the existing and future pool of leaders and inform selection, placement, and professional learning.
- Some programs included multiple rounds of selection to ensure that the best candidates ended up as principals (e.g., first selected for preparation program, then assistant principal, then principal).
- Some programs incorporated assessments that required leaders to demonstrate competencies in real-life scenarios. Examples of tasks include teacher observation and feedback and data analysis.
- Programs made efforts to match leaders to schools based on the needs of the school and the strengths of the leaders.

▷ *Use policies and incentives to support desired placement outcomes*

- Some programs offered additional compensation, autonomy in hiring, and other incentives to attract highly effective principals to high-needs schools that were hard to staff.
- Some programs required principals to commit to remaining in a district or school for a minimum time period (e.g., three years).

▷ *Identify strengths and weaknesses and provide feedback*

- Feedback on strengths and weakness was provided by some programs to both successful and unsuccessful candidates to facilitate improvement.

▷ *Provide sufficient support around preparation, planning, and integration*

- Research indicates that, in many cases, principal turnover adversely impacts students. Ensuring a smooth transition may be critical.
- Many programs integrated preservice training with recruitment and placement process.
- Programs occasionally shifted placement earlier in the year to provide principals more time for planning in advance of the school year.
- Many programs required principals to engage in planning processes for their new schools.
- Many programs offered coaching and professional development for new principals that can help to facilitate planning and successful integration into the school.

▷ *Replace ineffective principals with effective principals*

- Some programs faced challenges when focusing on removing ineffective principals without ensuring a sufficient pool of effective candidates to serve as replacements.
- Some programs focused on ensuring that principals who replaced ineffective principals have demonstrated turnaround success.

Logic model—Strategic staff management: Sample indicators to track progress on outputs

Resources	Activities	Outputs	Outcomes

- ● All reviewed programs mentioned this output
- ▶ *Some reviewed programs mentioned this output*

▶ *The candidate pool is of sufficient size and quality*

- Average time between date vacancy is identified and date principal is placed
- Number of candidates (as a proportion of the number of vacancies)
- Proportion of candidates demonstrating high levels of quality with regard to mastery of competencies and ability to meet standards
- Proportion of candidates placed into schools

▶ *Principals are well matched to schools*

- Extent to which needs of school align with the strengths and weaknesses of principal
- Proportion of principals for whom administrators report that school is a good fit
- Proportion of principals seeking placements in other schools
- Proportion of school staff who are satisfied with the principal

▶ *Placement and tracking processes provide information useful for leadership improvement*

- Proportion of principals reporting that they better understand their strengths and weaknesses
- Proportion of principals reporting that they took actions (e.g., professional learning) to address weaknesses
- Extent to which staff report they are able to better anticipate vacancies
- Degree to which professional learning offerings align with gaps in leader capacity

▶ *Principals are sufficiently prepared to lead schools*

- Proportion of principals who received high-quality preservice training
- Average length of time between placement and start of school year
- Number of hours of professional learning principal engages in prior to placement, in between placement and start of school, and in first school year

▶ *Schools experience minimal negative disruption around transitions*

- Average length of time school does not have a principal
- Average length of time between placement and start of the school year
- Average length of time effective principals remain in a school
- Extent to which staff are able to continue key activities required for instruction and school operations
- Degree to which staff report they were able to make changes for principal seamlessly

Logic Model—Professional Learning

Logic Model—Professional Learning

The problem: The ongoing training, support, and professional development offered to principals may fail to meet the needs of all principals, especially early-career principals and those placed in the most challenging schools. The amount of professional learning offered may be insufficient, the content of professional learning may not necessarily be aligned with principal or school needs, and/or the delivery of content may not be effective.

Resources	Activities	Outputs	Outcomes
Human resources Facilities Funding Materials	● Select or develop evidence-based professional development curriculum ● Identify and train (as needed) professional development providers (trainers and coaches) on the curriculum/program structure ▷ *Align professional learning with principal needs* ● Provide principals with high-quality training (i.e., evidence-based, applied, intensive) that contributes to career progression ▷ *Provide principals with access to regular, just-in-time support* ▷ *Develop peer learning communities and facilitate engagement*	○ Program content and structure is aligned with evidence on effective leadership ○ High-quality trainers/coaches/mentors prepared to deliver training to principals ▷ *Principals receive professional learning aligned with their needs* ○ Principals receive sufficient, high-quality training during formal training sessions ▷ *Principals receive sufficient, high-quality support between formal training sessions*	Improved principal competencies ↓ Improved schools ↓ Improved student achievement

Legend:
- ● All reviewed programs undertook this activity
- ▷ *Some reviewed programs undertook this activity*
- ○ All reviewed programs mentioned this output
- ▷ *Some reviewed programs mentioned this output*

Logic model—Professional learning: Details on activities reviewed in evidence-based programs

Resources	Activities	Outputs	Outcomes

Resources

● All reviewed programs undertook this activity

▶ *Some reviewed programs undertook this activity*

Activities

● Select or develop evidence-based professional development curriculum/program structure

- Programs typically fell in one of two categories (or occasionally had both): one-on-one training by coaches/mentors, and/or group training provided via classrooms, workshops, and conferences.
- Programs selected/developed professional learning around leadership competencies (e.g., "learner-centered" leadership and "building and maintaining collaborative relationships").

● Identify and train (as needed) professional development providers (trainers and coaches) on the curriculum/program structure

- Programs were developed by both vendors and district staff.
- Some vendors offer both direct training to principals and training of coaches/mentors, while others focus on a single population.

▶ *Align professional learning with principal needs*

- *One-on-one coaching/mentoring programs typically described needs assessment and tailoring of professional learning and matching of coaches to principals around principal needs.*
- *Several (group instruction) programs did not mention any needs assessment or links to evaluation.*

● Provide principals with high-quality training (i.e., evidence-based, applied, intensive) that contributes to career progression

- Programs typically included the following characteristics:
  - Sustained and intensive participation in multiple sessions over at least several months.
  - A structured curriculum and/or coaching approach designed around theory and evidence
  - Requirements that principals apply lessons on the job and reflect on these experiences (e.g., on-the-job observation and feedback, projects, residencies)
- Programs occasionally emphasized the importance of ensuring that training was structured to satisfy district/state professional learning requirements and/or count as credit toward degrees.

▶ *Provide principals with access to regular just-in-time support*

- *Many programs, especially one-on-one coaching/mentoring programs, offered regular access to support by Internet, phone, or in person.*

▶ *Develop peer learning communities and facilitate engagement*

- *Some programs offered explicit activities to engage peers in supporting learning. This was done within training sessions or through outside opportunities for engagement (e.g., online platforms).*

Logic model—Professional learning: Sample indicators to track progress on outputs

Resources	Activities	Outputs	Outcomes

- ● All reviewed programs mentioned this output
- ▶ *Some reviewed programs mentioned this output*

● Program content and structure is aligned with evidence on effective leadership
- Extent to which curriculum emphasizes principal competencies highlighted in the literature

● High-quality trainers/ coaches/mentors prepared to deliver training to principals
- Proportion of trainers with relevant incoming knowledge/experience (e.g., former principals)
- Proportion of trainers participating in training on curriculum and program structure
- Proportion of trainers who report being adequately prepared to deliver training

▶ *Principals receive professional learning aligned with their needs*
- *Extent to which goals and/or areas of weakness are aligned with the content of professional development sessions*
- *Proportion of principals and/or trainers who complete a needs-focused professional learning plan*
- *Extent to which professional learning is aligned with district policies and standards*
- *Proportion of principals reporting that trainings are relevant to issues they face on the job*

● Principals receive sufficient, high-quality training during formal training sessions
- Proportion of principals able to apply concepts from trainings on the job
- Proportion of principals able to demonstrate improved knowledge, skills, or abilities on key learning objectives for the training
- Proportion of principals reporting that training was sufficient in duration and intensity to provide adequate support

▶ *Principals receive sufficient, high-quality support outside of formal training sessions*
- *Degree to which principals engage in high-quality support discussions within learning communities*
- *Proportion of principals reporting adequate access to just-in-time support*
- *Proportion of principals reporting that the help they received was useful*
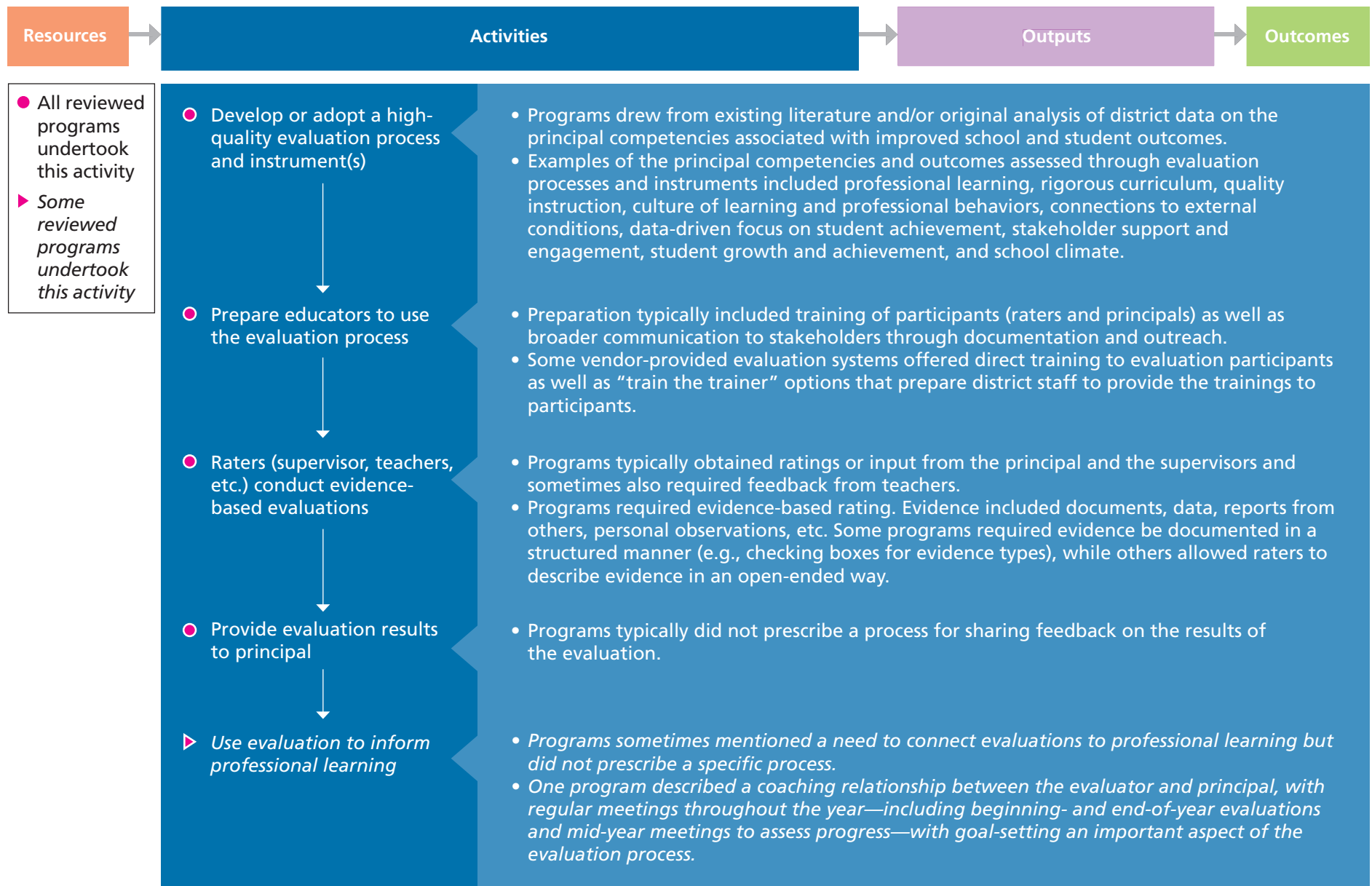
Logic Model—Leader Evaluation Systems

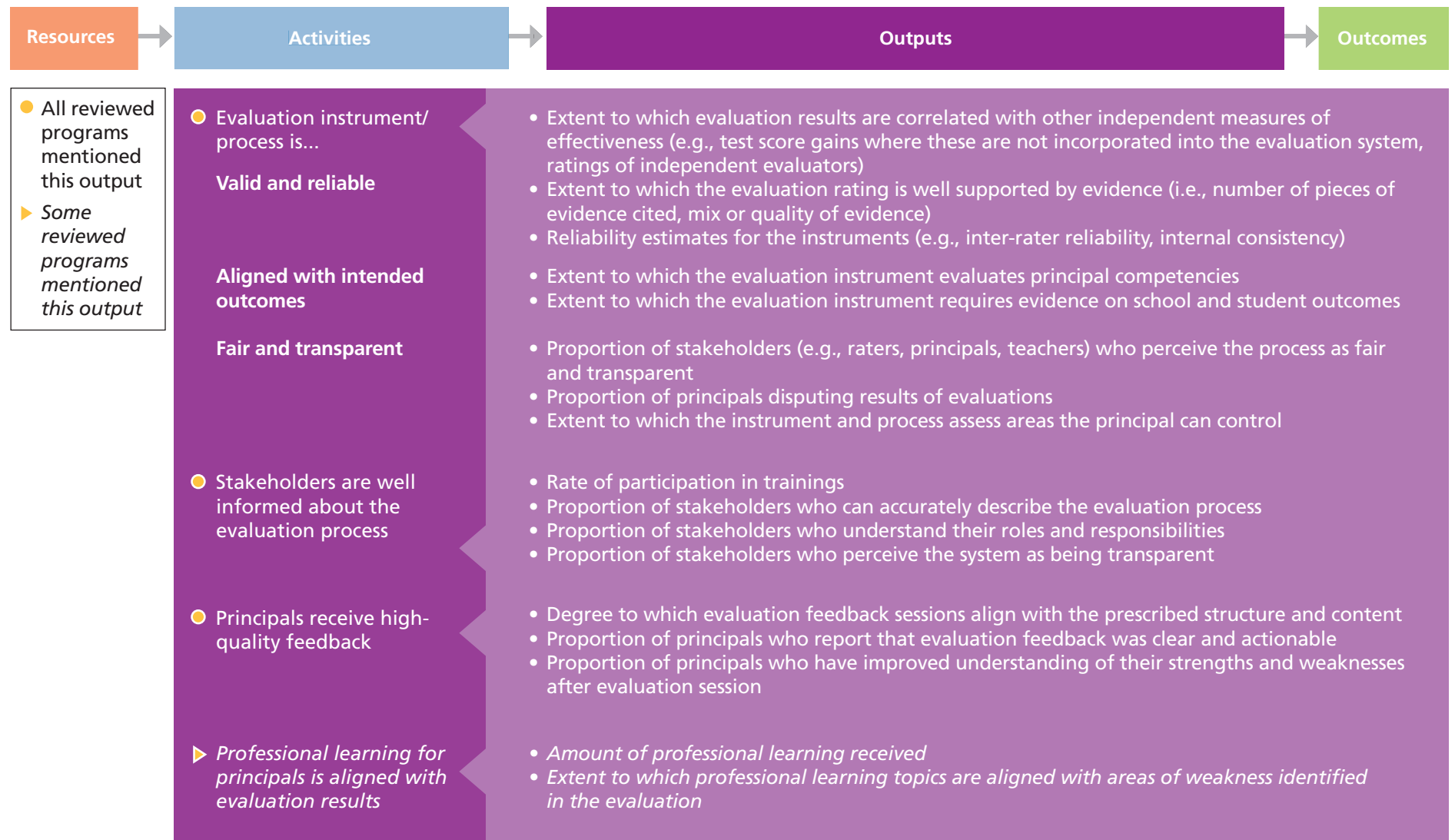# Logic Model—Leader Evaluation Systems

The problem: Districts often have limited information on the competencies and effectiveness of their school leaders, and principals often receive inadequate feedback on their abilities and progress. This can limit the ability of individual leaders to engage in professional growth and limit the ability of districts to assess leadership capacity and target efforts to improve capacity through other leadership interventions.

Resources	Activities	Outputs	Outcomes
Human resources	● Develop or adopt a high-quality evaluation process and instrument(s)	● Evaluation instrument/process is: ▷ Valid and reliable ▷ Aligned with intended outcomes ▷ Fair and transparent	Improved principal competencies
Facilities	● Prepare stakeholders to use the evaluation process	● Stakeholders are well informed about the evaluation process	↓
Funding	● Raters (supervisor, teachers, etc.) conduct evidence-based evaluations	● Principals receive high-quality feedback	Improved schools
Materials	● Provide evaluation results to principal	▶ *Professional learning for principals is aligned with evaluation results*	↓
	▶ *Use evaluation results to inform professional learning*		Improved student achievement

Legend:

- ● All reviewed programs undertook this activity
- ▶ *Some reviewed programs undertook this activity*
- ● All reviewed programs mentioned this output
- ▶ *Some reviewed programs mentioned this output*

Logic model—Leader evaluation systems: Details on activities reviewed in evidence-based programs

Resources	Activities	Outputs	Outcomes

Legend:
- ● All reviewed programs undertook this activity
- ▶ *Some reviewed programs undertook this activity*

● Develop or adopt a high-quality evaluation process and instrument(s)
- Programs drew from existing literature and/or original analysis of district data on the principal competencies associated with improved school and student outcomes.
- Examples of the principal competencies and outcomes assessed through evaluation processes and instruments included professional learning, rigorous curriculum, quality instruction, culture of learning and professional behaviors, connections to external conditions, data-driven focus on student achievement, stakeholder support and engagement, student growth and achievement, and school climate.

● Prepare educators to use the evaluation process
- Preparation typically included training of participants (raters and principals) as well as broader communication to stakeholders through documentation and outreach.
- Some vendor-provided evaluation systems offered direct training to evaluation participants as well as "train the trainer" options that prepare district staff to provide the trainings to participants.

● Raters (supervisor, teachers, etc.) conduct evidence-based evaluations
- Programs typically obtained ratings or input from the principal and the supervisors and sometimes also required feedback from teachers.
- Programs required evidence-based rating. Evidence included documents, data, reports from others, personal observations, etc. Some programs required evidence be documented in a structured manner (e.g., checking boxes for evidence types), while others allowed raters to describe evidence in an open-ended way.

● Provide evaluation results to principal
- Programs typically did not prescribe a process for sharing feedback on the results of the evaluation.

▶ *Use evaluation to inform professional learning*
- *Programs sometimes mentioned a need to connect evaluations to professional learning but did not prescribe a specific process.*
- *One program described a coaching relationship between the evaluator and principal, with regular meetings throughout the year—including beginning- and end-of-year evaluations and mid-year meetings to assess progress—with goal-setting an important aspect of the evaluation process.*

Logic model—Leader evaluation systems: Sample indicators to track progress on outputs

Resources	Activities	Outputs	Outcomes

Resources

- ○ All reviewed programs mentioned this output
- ▶ *Some reviewed programs mentioned this output*

Activities

○ Evaluation instrument/ process is...

Valid and reliable

Aligned with intended outcomes

Fair and transparent

○ Stakeholders are well informed about the evaluation process

○ Principals receive high-quality feedback

▶ *Professional learning for principals is aligned with evaluation results*

Outputs

- Extent to which evaluation results are correlated with other independent measures of effectiveness (e.g., test score gains where these are not incorporated into the evaluation system, ratings of independent evaluators)
- Extent to which the evaluation rating is well supported by evidence (i.e., number of pieces of evidence cited, mix or quality of evidence)
- Reliability estimates for the instruments (e.g., inter-rater reliability, internal consistency)

- Extent to which the evaluation instrument evaluates principal competencies
- Extent to which the evaluation instrument requires evidence on school and student outcomes

- Proportion of stakeholders (e.g., raters, principals, teachers) who perceive the process as fair and transparent
- Proportion of principals disputing results of evaluations
- Extent to which the instrument and process assess areas the principal can control

- Rate of participation in trainings
- Proportion of stakeholders who can accurately describe the evaluation process
- Proportion of stakeholders who understand their roles and responsibilities
- Proportion of stakeholders who perceive the system as being transparent

- Degree to which evaluation feedback sessions align with the prescribed structure and content
- Proportion of principals who report that evaluation feedback was clear and actionable
- Proportion of principals who have improved understanding of their strengths and weaknesses after evaluation session

- *Amount of professional learning received*
- *Extent to which professional learning topics are aligned with areas of weakness identified in the evaluation*

Logic Model—Working Conditions

Logic Model—Working Conditions

The problem: Potentially effective principals may not be achieving their full potential due to unclear expectations, lack of incentives, limited autonomy, bureaucratic central office processes, or insufficient support from supervisors and other departments.

Resources	Activities	Outputs	Outcomes
Human resources	● Provide additional staff support to principals	○ Principals make decisions in areas critical for school improvement	Improved principal competencies
Facilities	▷ *Empower and encourage principals to make needed changes in the school*	○ Principals reallocate their efforts to focus on activities more closely aligned with school improvement	↓
Funding	▷ *Provide principals with professional development on competencies related to changes in working conditions*	▷ *Principal job descriptions and performance expectations are revised to reflect greater autonomy and accountability*	Improved schools
Materials	▷ *Communicate clearly about goals for the school and respective responsibilities*		↓
	▷ *Hold school leaders accountable for results*		Improved student achievement

Legend:
- ● All reviewed programs undertook this activity
- ▷ *Some reviewed programs undertook this activity*
- ○ All reviewed programs mentioned this output
- ▷ *Some reviewed programs mentioned this output*

Logic model—Working conditions: Details on activities reviewed in evidence-based programs

Resources	Activities	Outputs	Outcomes

- All reviewed programs undertook this activity
- *Some reviewed programs undertook this activity*

○ **Provide additional staff support to principals**

- Staff at the district or school level provided support, such as taking on some of the principal's management responsibilities, enabling the principal to focus on instructional leadership and other key activities. The school staff role, one of the resources named across school leadership interventions, is particularly central for working conditions.

▷ *Empower and encourage principals to make needed changes in the school*

- *Some principals were given the authority to make decisions at the school level, and policies that may have impeded them were revised or removed.*
- *Some principals were offered compensation (e.g., incentive bonuses, pay-for-performance) tied to improved student outcomes.*

▷ *Provide principals with professional development on competencies related to changes in working conditions*

- *Professional development included topics such as time management skills, making human resource decisions, and delegating.*

▷ *Communicate clearly about goals for the school and respective responsibilities*

- *Key aspects of working condition changes tended to be communicated clearly. Such changes included which responsibilities were allocated to the principal and which remained with the district.*

▷ *Hold school leaders accountable for results*

- *Expected school results were generally clearly stated.*
- *School leader performance was measured, at least in part, by school results.*

Logic model—Working conditions: Sample indicators to track progress on outputs

Resources	Activities	Outputs	Outcomes

Resources

- ● All reviewed programs mentioned this output
- ▶ *Some reviewed programs mentioned this output*

Activities

● Principals make decisions in areas critical for school improvement

● Principals reallocate their efforts to focus on activities more closely aligned with school improvement

▶ *Principal job descriptions and performance expectations are revised to reflect greater autonomy and accountability*

Outputs

- Proportion of human resource decisions, such as hiring, releasing, promoting, and rewarding school staff, made by principals
- Proportion of school costs (e.g., personnel) budgeted at the school level
- Proportion of programmatic decisions, such as supports for students needing extra help, made by principals
- Extent to which decisions in areas critical for school improvement are aligned with local school needs and conditions. For example, the principal prioritizes hiring staff with prior success working with school's demographic

- Proportion of time principals spend on instructional support, human resources, budget, and similar areas, compared to management activities that can be conducted by others (e.g., cafeteria duty)

- *Extent to which principal job descriptions focus on instructional leadership and school improvement*
- *Extent to which principal performance expectations are related to student and teacher/school outcomes*

Logic Model—School Improvement

Logic Model—School Improvement

The problem: School turnaround research repeatedly shows that an effective principal is at the core of every successful school turnaround; however, not every principal is well equipped to effectively lead such an effort.

Resources	Activities	Outputs	Outcomes
Human resources Facilities Funding Materials	● Provide principals with professional development focused on school turnaround competencies and strategies ▷ *Select new principals for persistently low-performing schools* ● Empower principals to make needed changes in the schools ● Provide access to resources ● Create peer networking opportunities	● Principals receive high-quality professional development and technical assistance ● Principals make decisions in areas critical for school improvement	Improved principal competencies ↓ Improved schools ↓ Improved student achievement

● All reviewed programs undertook this activity
▶ *Some reviewed programs undertook this activity*
● All reviewed programs mentioned this output
▶ *Some reviewed programs mentioned this output*

Logic model—School improvement: Details on activities reviewed in evidence-based programs

Resources	Activities		Outputs	Outcomes

Resources

- ● All reviewed programs undertook this activity
- ▶ *Some reviewed programs undertook this activity*

Activities

○ Provide principals with professional development focused on school turnaround competencies and strategies

- Schools provided principals professional development that was
  - intensive,
    - ◆ In some cases, professional development took the form of multiday, offsite events, involving cohorts of turnaround principals and/or leadership teams.
    - ◆ In some cases, professional development took the form of frequent site-based mentoring.
  - job-embedded,
  - usually focused on topics associated with successful school turnaround, such as achieving consensus around goals, using data to improve instruction and programming, and accomplishing quick wins.
- Professional development included supports after principals were in place.
- Some professional development programs provided training on how to design, apply for, and open a charter school.

▶ *Select new principals for persistently low-performing schools*

- *Professional development included supports after principals were in place.*
- *Some professional development programs provided training on how to design, apply for, and open a charter school.*

○ Empower principals to make needed changes in the schools

- Principals were given the authority to make decisions at the school level, and policies that may have impeded them were revised or removed.

○ Provide access to resources

- Schools provided access to a library of research on effective practices.
- Schools provided tools to guide planning, goal setting, and other school improvement activities.

○ Create peer networking opportunities

- Principals were given time to share approaches with colleagues in similar situations.
- Training events were used to develop peer networks.
- Principals were paired with effective leaders within the district or network who served as mentors.

Logic model—School improvement: Sample indicators to track progress on outputs

Resources	Activities	Outputs	Outcomes

- ● All reviewed programs mentioned this output
- ▶ *Some reviewed programs mentioned this output*

● Principals receive high-quality professional development and technical assistance	• Extent to which high-quality professional development is delivered as planned • Extent to which high-quality professional development is job-embedded (e.g., residency, working within one's own school) • Proportion of high-quality professional development that is delivered over at least one year, or longer
● Principals make decisions in areas critical for school improvement	• Proportion of human resource decisions, such as hiring, releasing, promoting, and rewarding school staff, made by principals • Proportion of school costs (e.g., personnel) budgeted at the school level • Proportion of programmatic decisions, such as supports for students needing extra help, made by principals

Considering Resources

Before selecting a school leadership intervention, states and districts should identify the resources needed for successful implementation and determine whether the intervention is feasible, given constraints on available resources. In addition to identifying resources that support implementation, it can be useful to capture other aspects of the state or district context that might hinder the intervention. Given that the programs reviewed did not provide sufficient information on resources, we instead suggest a set of questions that programs might ask themselves as a first step to identifying the resources required for the logic model and program implementation.

Human resources

- Who is receiving the intervention?
  o Is the intervention for aspiring principals, new principals, and/or experienced principals?
  o Does the intervention involve other members of the leadership team?
  o What types of schools will the leaders serve in, and what will their constraints be on participation in the intervention?
  o What are the incoming competencies of leaders served by the intervention?
- Who is responsible for providing the intervention?
  o Who is directly involved in the intervention activities, and where will these staff members come from?
  o If an intervention is adopted from a vendor, what role does the vendor play in supporting the intervention?
- Who else might affect the implementation and effectiveness of the intervention?
  o Who inside of the education system (e.g., teachers, students) might be important?
  o What external partners might be important?

- How much time is needed from each of the individuals involved? Is additional staff required?
- How will stakeholders involved in the intervention communicate and interact?
  o Should committees or boards be convened to oversee design, implementation, and/or evaluation?
  o How will participants interact with each other and intervention staff, and to what degree should this be formally laid out under the intervention?
  o Are there existing barriers to intervention-related interactions to consider?
- What are the constraints on human resources available in the state or district?
  o How much existing capacity is available among current employees?
  o What are the processes and restrictions around hiring new staff?
  o Is there a population of individuals ready to participate in the intervention?
  o Are there barriers to external partnerships?

What human resources are needed to implement the intervention? Are those human resources available?

Facilities

- Where will the intervention activities take place?
  o Does the intervention require technology, software, or online components?
  o Are there other physical supplies or equipment required for the intervention?
- What are the constraints on facilities in the state or district?

What facilities are needed to implement the intervention? Are those facilities available?

Funding

- What are the estimated costs to support the intervention at various stages (i.e., development, ongoing implementation, evaluation, and adjustment)?
- Who will provide direct funding for the intervention, and through what mechanisms?
- Who will provide in-kind donations for the intervention, and through what mechanisms?
- What are the constraints on funding and in-kind donations in the state or district?

What financial resources are needed to implement the intervention? Are those financial resources available?

Materials

- What other materials are needed to support the intervention?
  - o Do any of the intervention activities require physical or digital materials?
  - o Are there other physical or digital materials required to inform stakeholders about the intervention?
  - o Are there any constraints on the production or distribution of physical or digital materials?

What materials are needed to implement the intervention? Are those materials available?

Data

- What data are needed to support the intervention?
  - o Are there existing data that can inform planning?
  - o What data need to be used to support implementation?
  - o What data need to be collected to assess implementation and impact?
  - o What are the constraints around collecting, storing, or using data?

What data are needed to implement the intervention? Are those data available?

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The guide expands on RAND's 2017 synthesis of the evidence base on school leadership interventions, *School Leadership Interventions Under the Every Student Succeeds Act: Evidence Review: Updated and Expanded*.

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