



PROFESSIONAL LEARNING

PLANS:

A WORKBOOK FOR
STATES, DISTRICTS,
AND SCHOOLS



Learning Forward
504 S. Locust St.
Oxford, OH 45056
513-523-6029
800-727-7288
Fax: 513-523-0638
E-mail: office@learningforward.org
www.learningforward.org

Author and project director: Joellen Killion
Editor: Joyce Pollard
Designer: Jane Thurmond
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Killion, J. (2013). *Professional learning plans: A workbook for states, districts, and schools*. Oxford, OH: Learning Forward.

Acknowledgements

Learning Forward's Transforming Professional Learning to Prepare College- and Career-Ready Students: Implementing the Common Core is a multidimensional initiative focused on developing a comprehensive system of professional learning that spans the distance from the statehouse to the classroom. The project will reform policy and practice and apply innovative technology solutions to support and enhance professional learning. With an immediate focus on implementing common core state standards and new assessments, the initiative provides resources and tools to assist states, districts, and schools in providing effective professional learning for current and future education reforms.

This work is supported by Sandler Foundation, the Bill & Melinda Gates Foundation, and MetLife Foundation.

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We express appreciation to Linda Munger and Terry Morganti-Fisher, Learning Forward senior consultants, who contributed to the plan for this workbook. Their input was invaluable.

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Introduction

A professional learning plan is the navigation system for the comprehensive professional learning system. As discussed in the publication, *Comprehensive Professional Learning Systems: A Workbook for Districts and States*, a comprehensive professional learning system is the engine that powers educator learning. The professional learning system creates the conditions and structures in which effective professional learning works and links professional learning to other systems that function in a state, school system, or school. It requires, however, a guidance system that sets the destinations, gives directions, and provides progress indicators and other information to support the journey. The professional learning plan is that navigation system.

A professional learning plan establishes short- and long-term plans for professional learning and implementation of the learning. Such plans guide individuals, schools, districts, and states in coordinating learning experiences designed to achieve outcomes for educators and students.

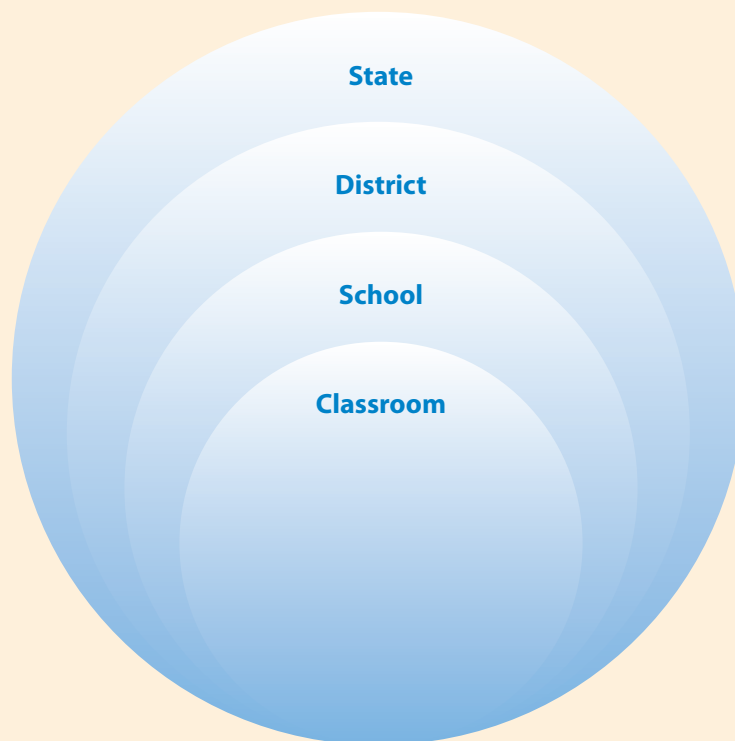


Figure 1. Relationships among Levels that Contribute to Professional Learning Plans

When the guidance provided by the plan aligns high-priority needs with actions, capacities, and resources to address those needs, individual and collective effort is focused on the destination—college- and career-ready students. A comprehensive professional learning system without a plan is an engine without steering, and a plan without a system is a steering mechanism without any power. The two must be inextricably connected.

Rationale for a Professional Learning Plan

Professional learning plans focus on the program of educator learning. A program of professional learning is “a set of purposeful, planned actions and the support system necessary to achieve the identified goals. Effective [professional learning] programs are ongoing, coherent, and linked to student achievement” (Killion, 2008, p. 11). Events, on the other hand, are occasional, episodic, disconnected incidents that are scheduled periodically throughout a school year. Typically, they have little or no connection with one another and little chance of producing substantial change (Killion, 2008). Events are simply not enough to do more than raise awareness, transmit information, and possibly ignite a desire to change. For example, a workshop on using literacy across the curriculum is not a program of professional learning, whether the duration is two hours or 20. A program is not about the number of hours of formal learning, but about the nature of the learning itself. It may be informal or formal, but it must include application, analysis, reflection, coaching, refinement, and evaluation of effectiveness to produce results for educators and students. Furthermore, it needs to address state, school system, school, team, and individual learning goals.

While some steps in the development of professional learning plans are parallel to those needed to develop a comprehensive professional learning system, the two development processes differ in significant ways. The professional learning plans focus on the specific content, learning designs, implementation support, and evaluation of professional learning. The comprehensive professional learning system establishes the overall infrastructure and operations that support effective professional learning. With a strong comprehensive professional learning system in place, any short- or long-term professional learning plan is far more likely to succeed.

This workbook is organized around the steps as shown in Table 1.

Table 1. Developing Professional Learning Plans

Develop Short- and Long-term Professional Learning Plans		Task
Step 1	Analyze student learning needs.	<ul style="list-style-type: none"> • Gather multiple forms of student data.
Step 2	Identify characteristics of community, district, school, department, and staff.	<ul style="list-style-type: none"> • Analyze the data to identify trends, patterns, and areas of needed improvement. • Gather data about the learning context. • Identify the features of the context that influence student and educator learning. • Identify potential contributors to the current state of student learning. • Write SMART goals for student learning. • Gather data about educators.
Step 3	Develop improvement goals and specific student outcomes.	<ul style="list-style-type: none"> • Review research and evidence on successful professional learning programs or practices. • Identify those relevant to the current goals and objectives.
Step 4	Identify educator learning needs and develop goals and objectives.	<ul style="list-style-type: none"> • Develop educator SMART objectives. • Develop KASABs. • Develop logic model.
Step 5	Study research for specific professional learning programs, strategies, or interventions.	<ul style="list-style-type: none"> • Study professional learning research related to goal area and context features. • Identify research- or evidence-based practices.
Step 6	Plan professional learning implementation and evaluation, including establishing a logic model for specific professional learning programs.	<ul style="list-style-type: none"> • Develop theory of change with assumptions. • Develop logic model.
Step 7	Implement, evaluate, and sustain the professional learning.	<ul style="list-style-type: none"> • Enact the plan. • Monitor progress and adjust as needed. • Evaluate progress and results. • Sustain support to achieve deep implementation over time.

Core Elements of a Professional Learning Plan

Most professional learning plans, whether short-term, annual, or multi-year, contain the following elements:

Needs analysis. Needs emerge from data, not wishes. Through a process of analyzing data about students, educators, and the system, studying trends and patterns, and assessing the potential causes of contributors, needs emerge. These needs are then studied to understand what might be causing or contributing to them.

Goal(s). Goals specify the broad outcomes of professional learning. Typically, they are stated as outcomes for students, e.g. student achievement increases because educators learn. Many plans use the SMART goal format to convey the goal(s).

Objectives. Objectives delineate the specific long- and short-term changes that need to occur in order to meet the goal(s). In professional learning they are frequently stated as the knowledge, attitudes, skills, aspirations, and behavior (KASAB) changes that occur in educators to achieve the goal(s) stated for students.

Strategic actions/Interventions. The strategic actions or interventions delineate what a state, district, school, team, or individual does, provides, or offers to accomplish the changes necessary to achieve the goals.

Timeline. The timeline explains when actions will be completed and the objectives and goals achieved. It helps monitor progress over the duration of a plan.

Responsible person(s). The responsible person(s) is the designated point person, or the persons who know about the actions and the status of each action. In most cases, the responsible person(s) works with a team or multiple individuals to complete an action.

Indicators of success. Indicators of success describe how planners will know whether the actions have occurred, and the goals and objectives have been achieved. In other words, the indicators are descriptions of the completed actions or markers that demonstrate progress toward the goals.

Measures of success. Measures of success identify how the data or evidence will be collected to demonstrate the indicators of success. For example, if improved student writing is an indicator of success, the measures of success are the quarterly writing samples scored by teachers.

Evaluation plan. The evaluation plan measures the success of the professional learning. It uses the indicators of success and measures of success to guide data collection to determine if the goals and objectives were achieved, if the strategic actions and interventions were appropriate, and what improvements can be made in future professional learning plans.

Resources needed. Resources include the staff, technology, funding, materials, and time necessary to accomplish the objectives and goals. Resources may also be called the inputs.

The following components are sometimes included in professional learning plans:

Assumptions. The assumptions are statements of belief, rather than facts, that undergird or drive the design of the plan. The assumptions frame the plan's development and serve to explain its design.

Theory of change. A theory of change maps the sequential actions needed to achieve identified goals. This theory is often graphically displayed to demonstrate the interrelationship of the components. It identifies the core components of professional learning that will produce the intended changes.

Logic model. A logic model is a diagram showing how a program works. Because it delineates the inputs, short-term outputs, and intermediate-term and long-term outcomes, the logic model is used as a progress-monitoring, assessment, evaluation, and communication tool.

Individuals who are leading or facilitating professional learning planning teams or members of planning teams may use *Tool i: Websites to sample professional learning plans* to locate examples of templates and formats for professional learning plans. These examples represent how professional learning plans are structured, not necessarily exemplary plans.

Backmapping Model for Planning Professional Learning

The Backmapping Model in Figure 2 outlines a seven-step process for planning professional learning. Some of the steps may seem familiar. They are, in fact, steps included in most state, school system, and school improvement planning processes. Improvement plans and professional learning plans complement one another and are essentially nested together.

Professional learning is a primary means for improving schools. Improvement plans identify student learning goals; professional learning plans identify what educators learn to achieve those goals.

The entire Backmapping process integrates the Standards for Professional Learning. The delineation of the stages below identifies the relevant standards. A core premise of the Standards for Professional Learning is the inter-relationship among the standards. The standards work in unison to describe the attributes of research-based professional learning.

The Backmapping Model guides educators in planning professional learning that improves student success.

- **Step 1** engages educators in identifying student learning needs (Data standard).
- **Step 2** involves analyzing the department, school, school system, state, and federal context (Data and Learning Communities standards).
- **Step 3** involves development of an improvement goal that specifies improved student achievement as the end result (Outcomes standard).
- **Step 4** focuses on using data about educators to identify their learning needs in light of student learning needs and the established educator learning goals (Data and Outcomes standards).
- **Step 5** involves reviewing research and evidence about the content and professional learning designs and the requisite organization conditions that are successful in increasing educator effectiveness and student learning under similar circumstances as those identified (Learning Communities, Leadership, Resources, Learning Designs, Implementation, Outcomes standards).

- **Step 6** engages the planning team in selecting, adapting, or creating professional learning to meet identified goals, as well as planning for its implementation and evaluation (Learning Communities, Leadership, Resources, Data, Learning Designs, Implementation, Outcomes standards).
- **Step 7** involves implementing, sustaining, and evaluating professional learning (Learning Communities, Leadership, Resources, Data, Learning Designs, Implementation, Outcomes standards).

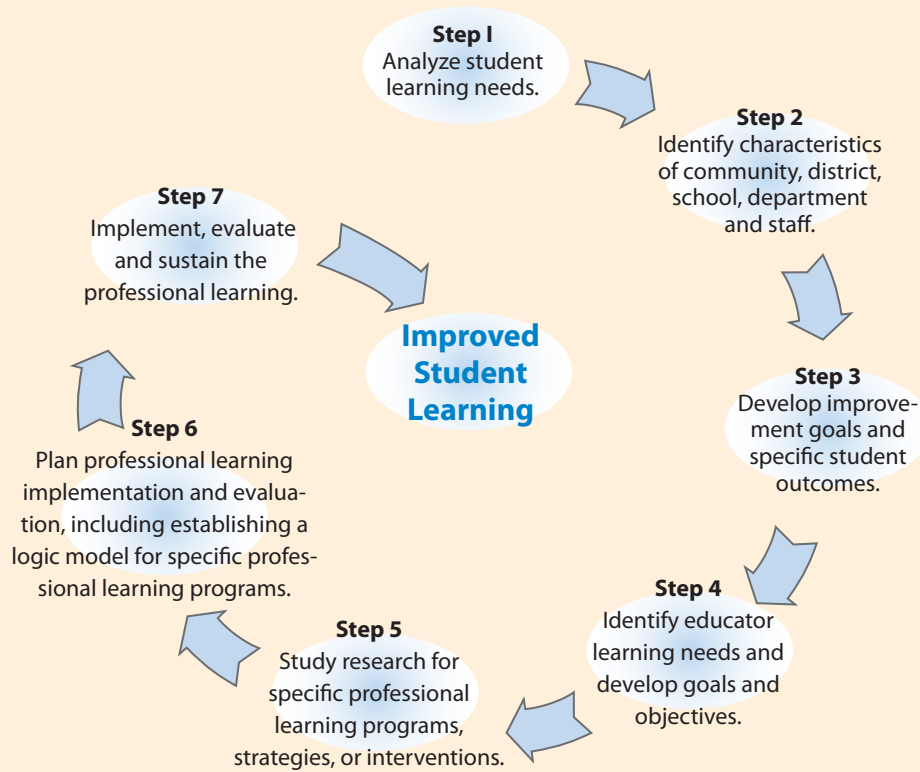


Figure 2. Backmapping model diagram

Tool for Studying Professional Learning Plans

Tool	Tool Title	Description
i	Websites to sample professional learning plans	These web-based resources give examples of different structures of state, school system, school, and individual professional learning plans.

Analyze Student Learning Needs

When professional learning is directly tied to student learning needs, student content standards, and educator performance standards, it is more likely to change educator practice and student learning (Desimone, 2009; Garet, et al; 1999; Learning Forward, 2011). Specifically, the Standards for Professional Learning specify:

Professional learning that increases educator effectiveness and results for all students uses a variety of sources and types of student, educator, and system data to plan, assess, and evaluate professional learning (Learning Forward, 2011, p. 36).

Professional learning that increases educator effectiveness and results for all students aligns its outcomes with educator performance and student curriculum standards (Learning Forward, 2011, p. 48).

As the first step, professional learning planning requires careful and thorough analysis of student data to identify specific areas of focus. This means that adopted content standards, as well as current data about student academic and behavioral performance, are used to identify the specific content focus of professional learning. This analysis will help guide decisions about the content of professional learning. *Tool 1.1: Student data analysis protocols* offers a data analysis protocol for examining student data.

Key questions to answer during this step include:

- What assessment data are available?
- What is being measured in each assessment?
- What areas of student performance are meeting or exceeding expectations?
- What areas of student performance are below expectations?
- What patterns exist within the data? How are the data similar or different in various grade levels, content areas, and individual classes?
- How did various groups of students perform? (Consider gender, race, special needs, English language learners, socioeconomic status.)
- What do other data reveal about student performance?
- What surprises us?
- What confirms what we already know?

Analyze Student Learning Needs

The data analysis process results in planners of professional learning knowing or identifying the following:

1. Specific areas of student need;
2. Specific knowledge and skills that students need in order to improve achievement; and
3. Specific students or groups of students for whom the need is most prevalent or pronounced. The protocols in *Tool 1.1* through *Tool 1.3* provide sample processes for guiding data analyses.

Identifying mathematics as a content focus on the basis of assessment scores alone doesn't provide enough information for staff to design professional learning to address the problem. Certainly, state assessment data are important, but the analysis should include additional data to shed light not only on the content knowledge and skills, but also on related areas that influence student learning. Those data may include district or school formative assessments, grades, attendance, discipline, graduation rates, demographics, students' sense of safety, student effort, and other student data that might point to potential underlying contributors to current student performance. The list below suggests student characteristics that teams may examine to gain a deeper understanding of students:

- Academic performance
- Ethnicity/race
- Gender
- Socioeconomic status
- Mobility
- Family support
- Motivation
- Attitude toward school
- Experience in school
- Retention rates
- Sibling data

In the imaginary school system, when representative mathematics teachers join together with a curriculum coordinator, math coach, or school administrator to analyze subtest and student group scores, they find a particular group of students is performing poorly in the area of ratio and proportional relationships. The teachers then review the district curriculum to determine which standards and learning outcomes focus on this strand. They examine student performance on prerequisites to these standards and outcomes. Finally, they conduct a more detailed analysis of performance by student groups in the related concepts and skills. They gain actionable information that is specific enough to identify what knowledge, skills, practices, and dispositions educators need to improve student performance in ratios and proportional relationships.

Analyze Student Learning Needs

The professional learning planning team uses this information, plus information gathered during the analysis in Step Two, to establish a districtwide improvement goal in mathematics with a specific focus on ratios and proportional relationships. This same process occurs in school, grade level, department, and course-specific teams.

Tools for Analyzing Student Learning Needs

Tool	Tool Title	Description
1.1	Student data analysis protocols	This article describes a process for analyzing student learning data to identify student learning needs that will guide professional learning planning.
1.2	Data analysis protocol (informal)	This tool outlines an informal protocol for teams or faculties to use to look at sets of classroom-generated data.
1.3	Data analysis protocol (formal)	This tool is a formal data analysis protocol to use when analyzing annual assessment, end-of-course, or other high-stakes assessment data.

Identify Characteristics of State, School System, School, Department, and Educators

In Step Two, professional learning planners use what they know about students, educators, and the context in which educator learning occurs to inform decisions about professional learning. When those planning professional learning know as much as possible about the context, as well as about the student and adult learners, professional learning can be more intentionally responsive to those characteristics. The Data standard in the Standards for Professional Learning addresses system data as an essential source of information for planning professional learning.

Knowing specific characteristics of the school system influences the design of the learning and the nature of the follow-up support. For example, professional learning conducted among colleagues in a school with low trust and no time for professional collaboration is unlikely to succeed. A program designed for teachers working to meet the needs of urban, disadvantaged students may differ from one addressing the needs of students with limited English or one designed for rural schools. School systems with limited resources, including time, for professional learning may approach professional learning differently than systems where resources are plentiful. Understanding the context helps professional learning planners make informed decisions about appropriate professional learning.

Professional learning planners consider the following questions when developing a deeper understanding of educators and the school, district, or state conditions that influence educator learning. *Tool 2.1: Educator and context characteristics* provides a detailed list of context and educators attributes to consider in this step.

- What are the characteristics of the teaching staff?
- What are some characteristics of formal and informal leaders in the school system and in schools?
- What are the characteristics of the culture within the school system and schools?
- What are some characteristics of the community?
- What resources are available to support professional learning?

After gathering available data about the context and educators, the professional learning planners engage in data analysis to identify trends, patterns, educator learning needs, and needed changes in the context. This process parallels the analysis of student data with the exception that the available data useful in this step are often sparse. Because the processes are parallel, professional learning planners may use the same data analyses protocols to analyze context and educators data.

Identify Characteristics of State, School System, School, Department, and Educators

The deep analysis that occurs as a part of Step Two provides professional learning planners with a level of understanding about the context in which professional learning will occur so that they can more intentionally plan to address the context. It also gives them a deeper understanding of educators who are the learners.

Tool for Identifying Characteristics of State, School System, School, Department, and Educators

Tool	Tool Title	Description
2.1	Educator and context characteristics	This tool identifies characteristics of educators to study to develop a deep understanding of educators.

Develop Improvement Goals and Student Outcomes

In Step Three, planners of professional learning set explicit goals for professional learning to achieve intended outcomes. These goals also inform decisions about the design of professional learning, its implementation, and its evaluation. The goals define what students will learn as a result of educators' professional learning. Missing the mark in professional learning is easy without a goal for both students and educators. Effective professional learning, as defined by the Standards for Professional Learning and supported by research, focuses on the content that students are expected to master and the performance expectations educators are expected to achieve. The Outcomes standard addresses the link between educator professional learning and educator performance and student learning.

Before establishing a goal, however, it is necessary to identify potential contributors to the current results and assign priority to those contributing factors. Once the most significant contributing factors, or causes, are clear, the goal can be written to change the current status. For example, if students with limited proficiency in English are underperforming, a potential contributing factor might be that students are not experiencing consistent application of sheltered English strategies in all their classes. Teachers' professional learning, then, will focus on them in collaborative learning to plan and embed the strategies into each lesson.

Tool 3.1: Probing for causes helps educators explore the potential causes of the gap that exists between the current and desired state. *Tool 3.2: Fishbone diagram* is another process to explore potential causes for the current state and to determine which causes to address through professional learning.

Key questions about outcomes include:

- What results do we seek for students?
- What educator practices contribute to those results?
- What else must change in order to achieve the student results?

The goal of the professional learning should be stated in terms of student achievement; the changes educators make to achieve each student learning goal are stated in terms of educator objectives. Changes in educator knowledge, skills, dispositions, and practice are the means to changes in student learning. Writing student and teacher goals in the following SMART format increases the strength and clarity of the goal, and makes evaluation of the professional learning easier. Step Four provides additional information about educator learning objectives. *Tool 3.3: Working SMARTER, not harder: SMART goals keep key objectives in focus*, offers a brief article on writing SMART goals as follows:

Develop Improvement Goals and Student Outcomes

S = Specific

M = Measurable

A = Attainable/Actionable

R = Results-focused

T = Time-bound

SMART goal for student achievement: Often this goal is the same as the school system/school improvement goal, and therefore, it is the goal for professional learning.

Within two years, 90% of students in grades 4–9 will achieve proficiency or above in the area of ratios and proportional relationships on quarterly formative assessments and the annual end-of-year assessment.

The model in Figure 2 shows an example of a SMART goal for students and the SMART objectives for educators.

Connection between educator learning and student learning

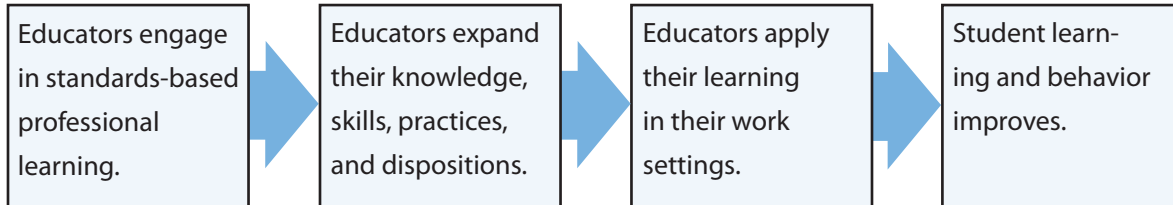


Figure 3. Relationship between educator professional learning and student learning

Too often goals are vague or focus on process rather than outcomes. For example, goals such as the following say little about whether educators are learning or what the anticipated effects of the learning are:

- One hundred percent of educators participate in professional learning on ratios and proportional relationships.
- Teachers participate in 10 hours of professional learning on math.

These goals only hold educators responsible for participation, or just attendance, in professional learning rather than for learning and for application of their learning. Effective goals and objectives for professional learning focus on outcomes. Specific processes will be described when it is time to plan the actions to achieve the goals.

Develop Improvement Goals and Student Outcomes

Tools for Developing Improvement Goals and Student Outcomes

Tool	Tool Title	Description
3.1	Probing for causes	This tool guides team members in exploring potential causes for student learning problems.
3.2	Fishbone diagram	This article with the tool helps teams organize potential causes for findings emerging from data.
3.3	Work SMARTER, not harder: SMART goals keep key objectives in focus	This tool discusses the value of SMART goals and provides good examples.

Identify Educator Needs and Goals

In Step Four, professional learning planners use data about educators and the goals for student learning to identify educator learning needs and objectives. Two standards link to this step of the planning process for professional learning. The first is the Data standard, which addresses the role of educator data in planning professional learning. “Educator” includes “those employed within schools and school systems and other education agencies to provide direct or indirect services to students” (Learning Forward, 2011, p. 20). Educator data emerge from performance evaluation, observations, self-analysis and reflection, student work and achievement, and gap analysis. The second standard is the Outcomes standard. When educator learning needs are grounded in the established performance expectations and support increased educator effectiveness and career advancement, the learning will be more relevant and purposeful.

Professional learning frequently begins with a needs assessment survey that asks educators to identify what they want to learn. This common practice may misconstrue *wants* with *needs*. Wants may not reflect what educators need to learn to address the identified student learning goals. For example, teachers are often eager to learn about innovative instructional practices or use of technology, and principals may want to learn how to shortcut nagging managerial tasks. However, if the district goal is to increase student reading and writing performance through the reading of complex text and the use of text-based evidence in explanations or arguments text, teachers and principals may need to forgo a focus on their wants and delve into deeper learning on the use of text-based evidence.

The objectives for professional learning, the changes educators make as a result of their learning, are also written in SMART format.

SMART Objectives for Professional Learning

The objectives for professional learning are the changes educators make as a result of their learning. Objectives written without attention to the SMART characteristics (Specific, Measurable, Attainable/Actionable, Results-based, and Time-bound), are not sufficiently detailed to act on and measure success, such as the following:

- Teachers will participate in professional learning on mathematics instruction.
- Principals will conduct walk-throughs at least four times per year.
- Teachers receive feedback.

Identify Educator Needs and Goals

Instead, useful objectives are developed in the SMART format as follows:

- At the end of the first year, teachers working in collaborative teams will deepen their content knowledge and acquire instructional skills and practices appropriate to ratios and proportional relationships and develop, implement, reflect on, and revise a common unit of instruction on ratios and proportional relationships that applies the newly acquired learning and engages students in applying their learning about ratios and proportional relationships in a real-life situation.
- At the end of the first year, district and school administrators will demonstrate how to use classroom walk-throughs to assess implementation of teacher professional learning and to provide feedback to teachers individually, in teams, and schoolwide about the implementation of professional learning.
- At the end of the second year, teachers working in collaborative teams will acquire and apply multiple strategies for formative assessment to use with all students including those who have special needs and who are second language learners and develop, implement, reflect on, and revise three study lessons on ratios and proportional relationships that apply the newly acquired learning and adapt instruction based on formative assessment data.
- At the end of the second year, district and school administrators will acquire and apply strategies to use data from teacher observations and walk-throughs to differentiate professional learning and other supports to increase the accuracy and frequency with which at least 80% of the teachers apply newly acquired knowledge, skills, and practices.

Student learning increases when educators, first, acquire knowledge, attitudes, skills, aspirations, and behaviors or practices (KASABs) aligned with what students are expected to know and be able to do; then, they apply that learning.

Knowledge: The information, concepts, principles, and theories, educators need to acquire to have the foundation for making sound decisions and implementing effective practices. Knowledge outcomes are often called awareness building and are insufficient alone to change practice.

Attitudes: The beliefs that support educators' commitment to continuous learning as a means to student success. Some examples are persistence, efficacy, growth-oriented, inquiry-oriented, etc. Too often professional learning assumes that transmitting knowledge and developing skills are sufficient for deep change and fails to address this need area. Attention to attitudes in professional learning addresses mental models educators hold, those internal theories or beliefs that drive their actions.

Skills: The capacities an educator needs to achieve the identified goal. This is sometimes considered procedural learning or the know-how behind new learning. Developing skills builds educators' capacity, but is often insufficient alone to promote the transfer of learning to practice.

Identify Educator Needs and Goals

Aspirations: The motivation that supports educators as they engage in learning to improve their practice and student success. Deep change is difficult and often unsuccessful because insufficient attention is given to development of a desire to succeed. Frequently, those engaged in planning professional learning fail to address educators’ personal concerns, how the learning affects the educators, in favor of consequence concerns, or how the learning affects students. Professional learning should extend beyond transmitting knowledge and developing skills to cultivating the desire to engage in making required changes.

Behaviors/Practices: What educators do with their learning. Too often professional learning stops at the awareness level or the skill development level and neglects to sustain learning and support through levels of use to attain refined use, application of the learning and refinements to adapt and adjust the learning in unique contexts. It is the implementation of learning that has been cultivated through developing knowledge and skill and cultivating attitudes and aspirations that increases educators’ effectiveness and student success.

Using one of the SMART objectives listed above, Table 2 provides an example of some KASABs for that objective.

Table 2. KASAB Applied to a SMART Objective

Objective:	At the end of the first year, teachers working in collaborative teams will deepen their own content knowledge and acquire instructional skills and practices appropriate to ratios and proportional relationships. They will be able to develop, implement, reflect on, and revise a common unit of instruction on ratios and proportional relationships that applies the newly acquired learning and engages students in applying their learning about ratios and proportional relationships in a real-life situation.
Knowledge	<ul style="list-style-type: none"> • Understanding of the content standard related to ratios and proportional relationships; • Content knowledge about ratios and proportional relationships as appropriate for the grade level of students; • Knowledge about the previous and subsequent grade-level expectations related to the content of ratios and proportional relationships.
Attitudes	<ul style="list-style-type: none"> • Belief in the importance of this content in students’ success in mathematics and beyond school; • Belief that all students are capable of learning these concepts with appropriate instruction; • Belief that applying mathematics concepts in authentic situations supports students’ understanding and ability to transfer these concepts in life; • Belief that mathematics includes productive struggle; • Belief that success in mathematics means less content and deeper learning; • Belief that by working collaboratively educators can be more effective.

Identify Educator Needs and Goals

Skills	<ul style="list-style-type: none"> • Collaboration skills; • Content-specific instructional skills including questioning to elicit student thinking; • Unit planning skills; • Reflection and self-analysis skills; • Data analysis skills.
Aspiration	<ul style="list-style-type: none"> • Desire to increase effectiveness as an educator; • Commitment to adapt instruction and content to align with the more rigorous content standards; • Persistence to examine one’s own practice and adjust it so that all students succeed; • Commitment to the professional growth of colleagues.
Behavior/ Practice	<ul style="list-style-type: none"> • Consistent use and refinement of new instructional practices until mastery is achieved; • Adaptation of instructional skills to meet needs of students; • Daily self-analysis and collaborative analysis of practice at least once a week; • Monthly unit planning integrating new instructional practices; • Development of authentic tasks for student application of ratios and proportional relationships.

After identifying educators’ learning needs aligned with the student learning goals, planners can develop SMART objectives for professional learning and plan how best to achieve those objectives.

Tool for Identifying Educator Needs and Goals

Tool	Tool Title	Description
4.1	Sample educator learning goals	The sample educator learning goals offer examples of how to write educator outcomes.

Study Research and Evidence for Guidance About Professional Learning

After establishing educator learning objectives, planners spend time examining research and evidence about professional learning to inform decisions about content and design of educator learning. In their urgency and enthusiasm to improve student performance, planners may pass over this critical step and rely on or adapt long-standing, comfortable practices. Or they may purchase programs of professional learning that fail to meet the standards or have little evidence of success.

Selecting or designing the most appropriate learning design is the focus of the Learning Designs standard:

Professional learning that increases educator effectiveness and results for all students integrates theories, research, and models of human learning to achieve its intended outcomes. (Learning Forward, 2011, p. 40)

When seeking externally developed professional learning programs or working with internal or external consultants to develop a professional learning plan, *Tool 5.1: Professional learning program review* may be useful for analyzing potential programs or strategic designs. To increase the likelihood for success, planners want to integrate into the professional learning plan actions that are grounded in evidence or research.

In addition to studying more specific professional learning programs, planners might study various learning designs to consider which aligns most closely with the learning outcomes. For example, if educators are expected to learn how to design and use information from formative assessments, their professional learning designs should integrate and model those practices as a part of the educator learning process and engage educators in collaborative development and critiquing of assessment for their classroom curricula to enhance application of the learning about formative assessment in practice.

Tool 5.2: Process: Selecting the design that works with the context and content is a chapter from *Powerful Designs for Professional Learning* (Easton, ed., 2008) that offers overviews of 21 professional learning designs. The book guides professional learning planners, facilitators, and participants in implementing each learning design. There is no absolutely right learning design; however, there are learning designs that are more appropriate than others in given circumstances. First, planners use what they know to identify the appropriate learning designs. Then, they use formative feedback and data to adjust and adapt learning designs so that they achieve the intended outcomes. Most importantly, planners, leaders, and others facilitate and support learners to select and use learning designs of their choice, because they ultimately are responsible for implementing the professional learning. Giving choice and voice to educators in their professional learning designs empowers educators, respects their professionalism, and provides autonomy (Knight, 2011).

Study Research and Evidence for Guidance About Professional Learning

Much professional learning is organic, not prescriptive or formalized. It is adaptive and flexible, thereby acknowledging that learning is continuous. It incorporates flexibility in content to acknowledge the current level of expertise and experience of educators, employees a variety of learning designs to respect how adults learn and the alignment between learning outcomes and learning designs, and differentiates implementation support to match learners' level of concern and use with type of support. In this informal approach to learning, educators develop an inquiry approach, examine their own practice, reflect on their application of the learning, and continually refine and strengthen their practice. When developing plans, professional learning planners incorporate a wide variety of flexible, informal, job-embedded learning with smaller amounts of formal professional learning.

Yet, when new initiatives are launched, professional learning plans often intentionally build foundational knowledge and skills and ensure that adequate support is available for implementation. When more structure is built into the plan, there is a greater likelihood that all educators have the support necessary to implement the new initiative.

To review potential professional learning programs or learning designs, planners might engage in a study that answers these questions:

- What professional learning addresses the skills and knowledge we have identified as educator learning needs?
- What professional learning are schools with similar student demographics using?
- If our school's characteristics do not match the schools in which the professional learning was successful, what are the key differences? How likely are those differences to interfere with the program's success? What changes might increase the likelihood of success?
- What aspects of the professional learning (if any) might need to be modified to accommodate the unique features of our school or students?
- What are the strengths and weaknesses of the professional learning?
- What school, district, and community support was required to make the professional learning successful?

Next, consider the school's context by asking:

- What are the characteristics of the culture and climate?
- What do teachers already know and what do they need to know next?
- What practices are teachers currently using in the classroom? How different are current practices from desired practices?
- Does the school culture embrace new practices or resist changes?
- What are teachers' current levels of understanding of content related to state standards?
- What support do teachers need in order to implement new strategies?

Study Research and Evidence for Guidance About Professional Learning

After examining research- and evidence-based professional learning practices and weighing the options, planners use the context factors identified in Step Two as criteria for selecting and/or designing the strategic approach to the professional learning that addresses needs and goals of the state, school system, school, staff, and students. Members decide to adopt or adapt an existing professional learning program or to create one that aligns with their unique state, school system, or school characteristics, learning goals, and current research. For example, if the staff of a school is comfortable working collaboratively and has sufficient resources, teams of educators may study current literature in the relevant area, design several ways to implement their learning, observe and provide feedback to one another, and examine student work samples from classes in which they applied their learning. In another school teams of teachers engage in action research to address chronic low performance of male students in literacy. If a staff is less collaborative and comfortable being accountable for their own learning, more structured learning designs might be used.

Choosing appropriate learning designs is a significant decision. It requires thought, input, and thorough discussion from those who are primarily responsible for implementing the professional learning. For example, in a school district that is implementing new mathematics instructional practices aligned with Common Core math standards, teachers’ voices are essential in planning, selecting, or designing the professional learning. In addition, they should be given a significant responsibility for facilitating their own professional learning so that it is relevant to their day-to-day classroom responsibilities, their students’ needs, and the curriculum they teach. When adopting, adapting, or creating a strategic approach to professional learning, decision makers and staff members are determining where they will place their energy and resources for improving educator practice and student achievement.

Tools for Studying Research and Evidence for Guidance about Professional Learning

Tool	Tool Title	Description
5.1	Professional learning program review	This tool is helpful when reviewing established professional learning programs.
5.2	Process: Selecting the design that works with the context and content	Questions and tables excerpted from <i>Powerful Designs for Professional Learning</i> provide resources for considering professional learning designs and setting criteria for selecting learning designs.

Plan Professional Learning Implementation and Evaluation

Planning the actual strategic approach to professional learning requires attention to a long-term view of learning, continuous differentiated support for implementation, and formative and summative assessments of the application and impact of professional learning. Simply put, not all types of professional learning will generate positive results for educators and students. That is, some types of professional learning may show little or no positive effect primarily because the professional learning plans are insufficient to produce deep learning and sustain implementation. In addition, many professional learning plans fail to acknowledge that learners differ in what they need to learn and where and how they will apply their learning.

After the context analysis and research about viable strategic approaches is completed, the first part of mapping out a plan is developing a theory of change. A theory of change identifies the essential actions needed within a professional learning plan to achieve the intended goals and objectives, the sequence of those actions, and the underlying assumptions that drive the theory of change. Concomitant with the theory of change is a logic model to delineate the outputs and outcomes.

Theory of Change and Logic Models

The theory of change maps how change will occur over time. In a sense, it is an if-then thinking process that shows the logic behind the actions planned. Some planners choose to use either a logic model or theory of change, and some use both. There are advantages to using each model.

A theory of change provides an overview of the operation of the entire program. A logic model maps and predicts the intended changes that occur over time from outputs to short- and long-term outcomes for educators and results for students. For example, the simple theory of change in Figure 3 shows how teacher professional learning affects student learning (Desimone, 2009). More detailed theories of change provide a map of how professional learning moves from acquisition of learning to results for educators and students (Killion & Harrison, 2006; Killion, 2008).

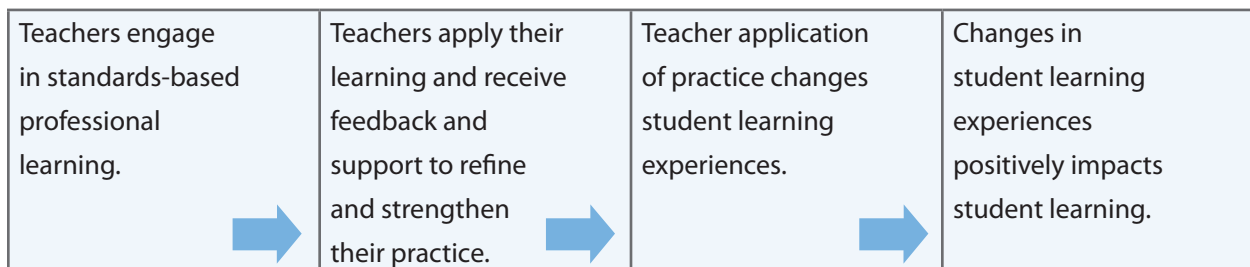


Figure 4. General theory of change

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Focusing on the interim changes shown by a logic model provides a vehicle for assessing the progress of professional learning and provides information to guide needed adjustments. Figure 4 shows the logic model that complements the general theory of change.

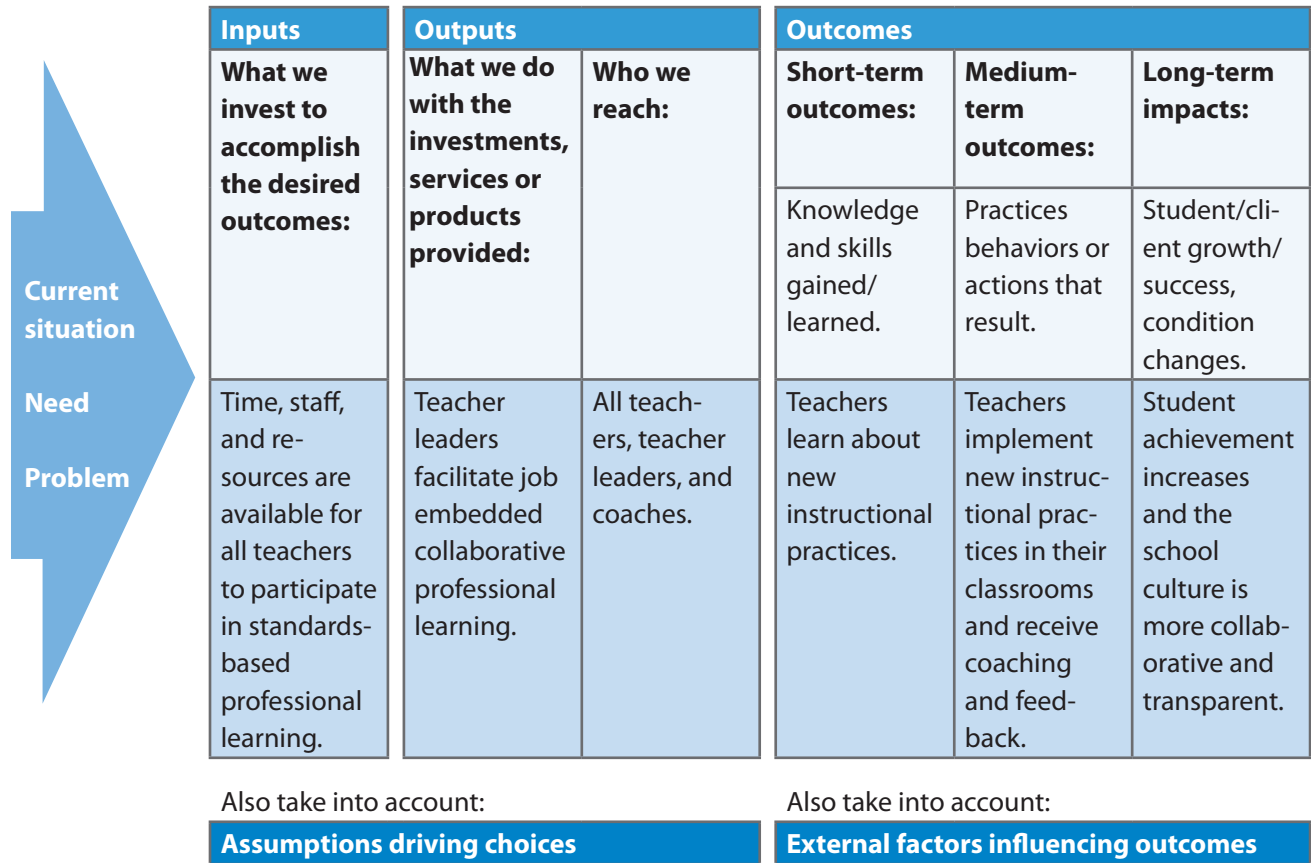


Figure 5. Logic model for simple theory of change

Given the information provided by a logic model, planners find that it is best used as a progress monitoring and evaluation tool. The monograph, *Teacher Professional Development Evaluation Guide*, (Haslam, 2010) uses a logic model framework for designing and evaluating a professional learning program. *Tool 6.5: Sample logic model for collaborative professional learning teams*, is a sample logic model.

Theories of change and logic models are useful planning, communication, self-monitoring, and evaluation tools. They allow learners themselves to monitor and assess their progress. When they are developed collaboratively, those who are expected to make the changes can provide valuable input about the support they anticipate needed, and the process used to achieve the goals. Collaboration in the development of these two tools builds ownership and responsibility for the success of the professional learning plan as well.

Plan Professional Learning Implementation and Evaluation

School District Begins Action Planning with Theory of Change

McClellan School District recognizes that the more rigorous content standards will require changes in instructional approaches in most classrooms. The district leadership team, which is made up of representatives of teachers, principals, non-instructional resource staff, district office staff, and higher education partners, reviews student achievement, educator practice, and school system data. In the case of McClellan School District, the theory of change rests on the assumptions the planning team members hold.

District improvement goal: By 2017, all students will achieve proficiency on state assessments, district end-of-course assessments, and quarterly common formative assessments in tested content areas and achieve student learning outcomes in non-tested content areas.

District objectives:

- By 2014, the district will create conditions including (a.) school day schedules and school year calendars that provide a minimum of three hours per week for collaborative learning and planning among teachers; (b.) facilitation skills for principals and teacher leaders to support collaborative learning and planning; and (c.) protocols for the cycle of continuous improvement for collaborative learning and planning teams.
- By 2016, the district curriculum, ELL, and special education staff will develop and provide classroom-specific instructional resources at all grade levels and in all content areas; differentiate learning and assessment for students who are significantly underperforming, who have special needs, who have enrichment and extension needs, and who have limited English; and provide guidance to teachers, teacher leaders, principals, and non-instructional resource staff on how to select and use the resources.

The leadership team studied how similar other districts recently improved math performance. They also reviewed the literature and determined that, to achieve their student goals, they need to focus on improving the quality of instruction. The team sets the following educator objectives for the district's overall improvement plan:

Educator objectives:

- By 2016, teachers will demonstrate proficiency in implementing the district's deeper learning instructional framework within their classrooms as measured by the deeper learning Innovation Configuration map and peer, principal, and district staff walk-through data.
- By 2014, supervisors and instructional support staff (i.e. coaches, teacher leaders, resource teachers) will provide monthly constructive feedback and supports to teachers individually and in teams to refine their implementation of the district's deeper learning instructional framework.
- By 2016, principals, working collaboratively with the school's leadership team, will cultivate a culture of collaboration, collective responsibility, and learning, as demonstrated by an overall score of 80%

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or higher in related areas on the working conditions survey, to support the student achievement through the implementation the deeper learning instructional framework.

To achieve the educator objectives established, the McClellan district planners consider how to move from where they are currently to where they want to be as defined in the student goals and educator objectives. They draw from the research they studied and their own past experiences to identify the assumptions on which they posit their theory of change.

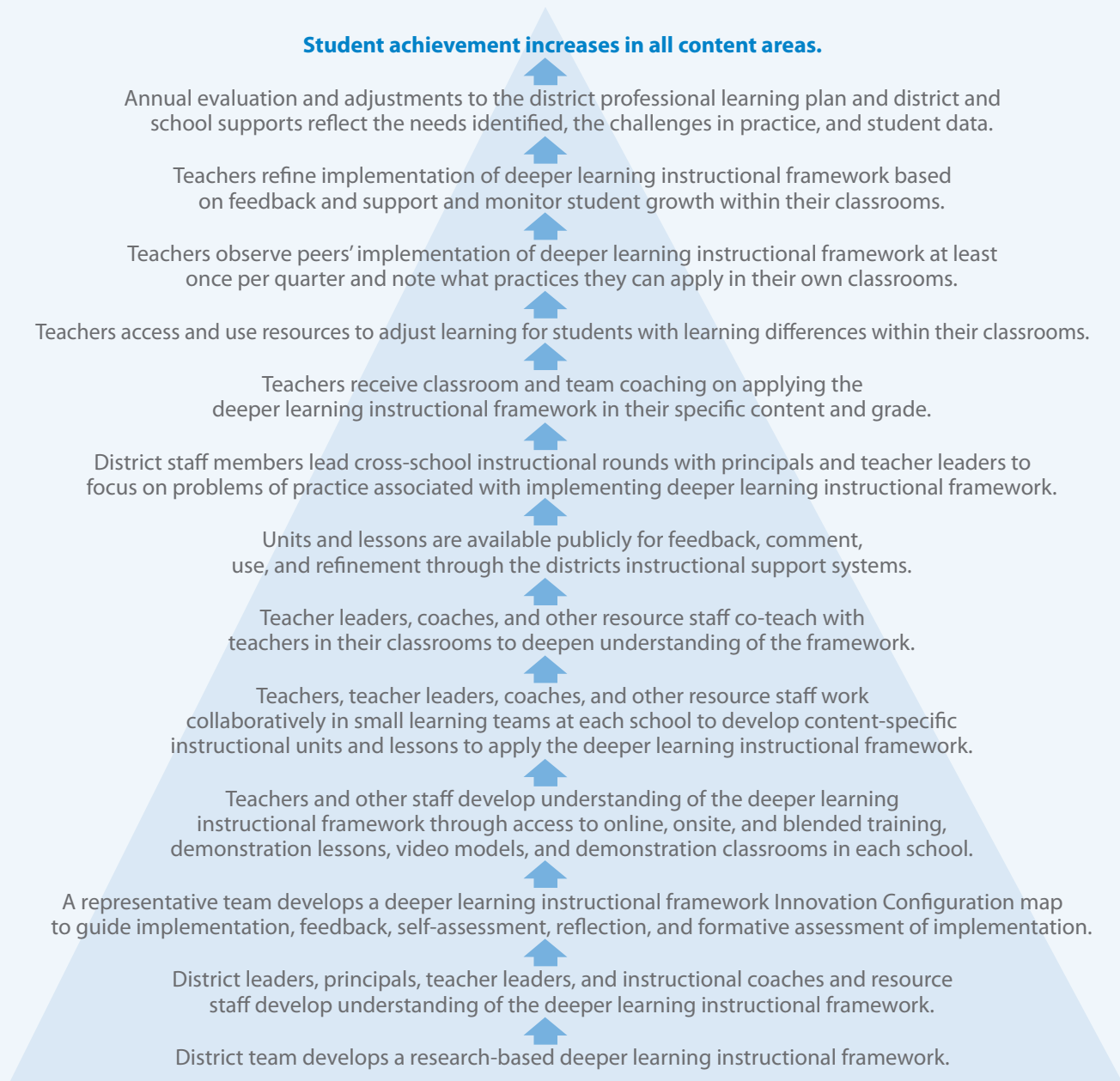


Figure 6. McClellan District theory of change

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In the case of McClellan School District, the theory of change rests on the assumptions the planning team members hold. Some of those assumptions are drawn from research; others come from evidence-based practice and the educators' own past experiences.

Assumptions underlying the theory of change depicted are as follows:

- All educators are responsible for the successful implementation of innovations.
- Multiple resources and supports increase the success of innovations.
- District and school leaders establish the conditions and provide the supports to transform practice.
- Sustained change in instruction that impacts student learning requires differentiated support over time.
- When educators work collaboratively, they increase both their skillfulness and commitment to change.
- Peer learning and support leverages the expertise of all educators to improve practice.
- Identifying and addressing barrier to change as they occur minimizes interruption in the learning process.

Resources About Implementation and Evaluation

Killion, J. (2008). *Assessing impact: Evaluating staff development, Second edition*. Thousand Oaks, CA: Corwin Press. https://store.learningforward.org/mm5/merchant.mvc?Session_ID=8fbba35ffb2e28fc2822aa5141cf01d7&Store_Code=L4W&Screen=PROD&Product_Code=B371&

Center for Theory of Change
www.theoryofchange.org

Useful resources about logic models include:

University of Wisconsin Extension
www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html

W. K. Kellogg Foundation
www.wkkf.org/knowledge-center/resources/2006/02/wk-kellogg-foundation-logic-model-development-guide.aspx

The Community Toolbox
ctb.ku.edu/en/tablecontents/sub_section_main_1877.aspx

Haslam, B. (2010). *Teacher professional development evaluation guide*. Oxford, OH: National Staff Development Council. Available at:
www.learningforward.org/docs/pdf/evaluationguide.pdf?sfvrsn=0

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Designs to Support Educator Learning

To put their theory of change into a plan, the McClellan District leadership team identifies specific actions, timelines, resources, persons responsible and indicators and evidence of success. (See sidebar, “School District Begins Action Planning” on pages 28–30.)

The overall goals and objectives are substantial and will require layers of professional learning for those who have a role in achieving them. For example, district office staff members must learn how best to develop staff and faculty capacity in the district’s deeper learning instructional framework; they also will learn how to lead instructional rounds focused on it. Concurrently, principals will learn how to identify instructional practices associated with the framework and give constructive, personalized feedback to staff. Coaches need to learn how to ask reflective and analytic questions to engage teachers in analyzing their own practice. Teacher leaders will learn how to make their decision-making and practices explicit so that those visiting their demonstration classrooms can understand what leads up to and occurs overtly and covertly in effective instruction. Teachers learn how to use each aspect of the framework and develop units and lessons that integrate the framework. They also learn how to assess learning at deeper levels.

As a result, the professional learning plan includes the necessary changes at district, school, team, and classroom levels. For example, if teachers are implementing new instructional strategies, principals learn how to support them and give feedback. In addition, district office staff may coach principals and teachers as well as provide the necessary instructional resources teachers will need. Each plan has similar components, but contains specific actions and accountabilities for each role at each level. The plans cascade into one another, showing how the actions of one contributor interact with others so that goals and objectives are met.

Different designs. Because of the differences in role expectation, action, and accountability at each level of Figure 3, professional learning planning teams bring what they learn from their study of viable learning designs and successful professional learning programs to determine what is most appropriate for the learners, the content, and the context in which they work. As the Learning Designs standard states, professional learning planning requires in-depth understanding of how learning happens for adults and application of that understanding.

Long view. In addition, most professional learning planners focus too narrowly on the early state of the learning process—acquisition of knowledge and skills—and fail to sufficiently address attitudes, aspirations, and behavior. After all, it is this latter set of professional learning objectives that deepens learning for long-term implementation. Initiating and fully implementing new professional learning takes time and energy for multiple years to achieve high levels of implementation and expertise with the learning. Full implementation of professional learning requires that leaders and learners plan not only for the acquisition of learning, but also for the follow-up and long-term support to yield refined levels of use of the learning.

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The learning designs integrated into professional learning need to be closely aligned with the outcomes and the learners. For example, if one outcome of professional learning is to increase educators’ capacity to work collaboratively with peers to analyze and reflect on practice, it is essential that the professional learning incorporates information and practice with individual and collaborative analysis and reflection on practice. To cement the learning and achieve full implementation, planners of professional learning include coaching, feedback, collaborative study groups, or other learning designs that assess practice, solve problems associated with practice, and provide feedback on practice for refining it. The seminal research of Joyce and Showers (2002), depicted in Table 3, demonstrates the added value of learning designs that extend learning from the “know about” level to the “know how,” or practice, level.

Table 3. Estimated Percentage of Achievement of Various Professional Learning Outcomes Associated With Professional Learning Designs

Professional learning designs	Outcomes of professional learning	
	Knowledge level (understand the content)	Skill attainment (demonstrate proficiency in the practice)
Presentation of theory	10	5
Demonstration of learning	30	20
Practice of learning	60	60
Coaching and other forms of workplace-specific support	80	95

Source: *Student achievement through staff development* (3rd edition) by B. Joyce & B. Showers, p. 78. Copyright by ASCD, 2002.

Learning Designs Address Educator Needs and Goals

By using designs that engage learners as students of the discipline first and educators secondly, educators develop a visceral understanding about the practices of analysis and reflection. As a result they will be better able to apply them in their daily work. When their learning experiences include only *knowledge* about analysis and reflection without actual practice in those skills, they will be less likely to implement them. For professional learning to succeed, professional learning designs need to match educator learning needs and outcomes.

To get the best fit among educator learning needs, the intended learning outcomes, and the appropriate learning design, planners consider a wide variety of learning designs. They engage learners in identifying their learning preferences and preferred learning designs and plan for the three levels of outcomes that Joyce & Showers (2002) identify: (1) knowledge acquisition, (2) skill development, and (3) transfer to

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practice. In addition, they consider how to address (4) learner attitudes and (5) learner aspirations in the learning process.

Many job-embedded learning designs are effective strategies for promoting all five outcomes as well as supporting collaboration among educators and developing collective responsibility for continuous improvement through professional learning and student success. Different learning designs can be used in combination to help educators learn about new practices, begin implementing new practices, consistently use new practices, build fluency with the practices, develop an appreciation for the value of the practice, and increase desire to use the practice to achieve positive results. Selecting learning designs requires attention to the overall outcomes, the needs of the adult learners, the context in which the learning will be applied, and learners' attributes. The ultimate goal is to enhance educator practices so that student learning increases.

A common learning design in use today is the use of video to provide authentic models of what new learning practices look like when applied accurately. A team of teachers may watch a video of a math lesson in which the teacher models productive struggle through the use of probing questions to engage students in explaining their thinking. For a small percentage of learners, the video is sufficient to transform their practice. The larger percentage of learners, the video alone is insufficient. They may want to unpack the behaviors the teacher in the video used by reading a transcript, describing how the questions are structured, noting differences among the questions, and identifying students' responses to the various types of questions. They may want opportunities to generate different types of questions to prompt student thinking or to learn if there are patterns of question stems to apply. They may benefit from observing peers use questioning skills and receiving feedback on their use of probing questions. They may want to include in future lesson plans several possible probing questions to consider for the specific content they are teaching. Teachers may also want to help students learn to use the questions with their peers.

When planning professional learning, it is helpful to think about short cycles of learning and application to achieve broader learning outcomes and high levels of implementation. The schedule below identifies how school teams might approach professional learning in a series of weeks in which teachers have two to three hours of time each week for collaborative learning. The table includes what the learning objectives are for the educator, how educators will achieve those goals, and the evidence they will produce along their learning journey.

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Table 4. Learning Team’s Application of the Cycle of Continuous Improvement

Week	Learning outcome	Learning design	Evidence	Sample
1	Develop an awareness of student and educator learning needs in ELA from benchmark writing samples and reading assessments.	<ul style="list-style-type: none"> Analysis of student and educator data using an informal data analysis protocol (See <i>Tools 1.1–1.3</i>). 	<ul style="list-style-type: none"> Drafts of student learning goal and educator learning objectives (see <i>Tool 4.1</i>); KASABs associated with educator learning objective (See Table 2). 	<p><i>Student learning goal:</i> Increase students’ performance by at least one level on the argumentative writing rubric over the next six weeks as measured on six-week writing task.</p> <p><i>Educator learning goal:</i> Develop a deeper understanding of argumentative writing and design and implement an argumentative writing unit with short and long writing tasks. Students use evidence from text to support arguments in their original writing.</p>
2	Develop knowledge and skills related to educator learning objective content.	<ul style="list-style-type: none"> Read Part I from <i>Teaching Argument Writing, Grades 6–12: Supporting Claims with Relevant Evidence and Clear Reasoning</i> by George Hillocks, Jr. (Heinemann, 2011). 	<ul style="list-style-type: none"> Graphic organizer of key ideas from text including strategies to integrate into the unit. 	Complete the Word organizer at www.educationoasis.com/curriculum/GO/GO_pdf/word_chart_illustrus.pdf
3	Develop application of the learning within the curriculum.	<ul style="list-style-type: none"> Develop collaboratively a unit on argumentation that includes at least one short and one longer piece of writing. 	<ul style="list-style-type: none"> Completion of the unit planner for writing arguments. 	Sample unit planner at www.state.nj.us/education/cccs/2009/updtemplate.doc
4	Examine student work.	<ul style="list-style-type: none"> Bring samples of student arguments to analyze. 	<ul style="list-style-type: none"> Read <i>Looking at Student and Teacher Work Collaboratively</i> www.nwp.org/cs/public/print/resource/904. Application of the <i>ATLAS Learning from Student Work</i> protocol to identify strengths and gaps in student learning. Identification of strengths and gaps in student writing. 	Use <i>Atlas—Learning from Student Work</i> protocol www.nsrffharmony.org/protocol/doc/atlas_lfsw.pdf

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5	Examine student work	<ul style="list-style-type: none"> Review sample performance tasks and student writing available at Literacy Design Collaborative and modify planned writing task and lessons. Plan peer observations during the week. 	<ul style="list-style-type: none"> Modification of student writing task and adapted lesson plans. 	<p>See resources at Literacy Design Collaborative</p> <p>www.literacydesigncollaborative.org/</p>
6	Score longer argument tasks.	<ul style="list-style-type: none"> Complete joint scoring of three student samples to calibrate scoring. Apply argument rubric to student writing scoring. Summarize strengths and gaps in student argument writing. 	<ul style="list-style-type: none"> Student scores on data wall and individual strengths and gaps noted to address in subsequent units. 	<p>See Data Walls</p> <p>http://successatthecore.com/leadership-development/video.aspx?v=8</p>
7	<p>Share feedback from peer observations;</p> <p>Reflect on how their understanding of argumentative writing and how to teach it has changed;</p> <p>Describe how the use of the strategies has influenced student writing; identify instructional practices to continue and ones to modify.</p>	<ul style="list-style-type: none"> List practices observed during peer observations and implications for own practice. Revisit and revise graphic organizer on argument. Develop "Start-Continue-Stop" list on instructional practices related to teaching argument. 	<ul style="list-style-type: none"> List of practices and implications; Modified graphic organizer; Completed "Start-Continue-Stop" table. 	<p><i>Tool 6.1: Peer observation practices and implications</i></p> <p><i>Tool 6.2 :Start-continue-stop doing template</i></p>
8-14	Repeat cycle making appropriate modifications for new student learning goals, educator learning objectives, and professional learning content and design.			

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This workbook does not intend to teach multiple learning designs. Other sources such as *Powerful Designs for Professional Learning* provide this information. However, it is helpful to know about some of these designs to initiate research about them. Collaborative teams use all the learning designs in the following list; individuals may use some of them alone. The added value of joint learning is that participants simultaneously develop a collective responsibility and a culture of collaboration. The following list is not comprehensive, but it offers suggestions in categories of student learning, educator learning, and content expertise.

1. Gathering and using information from within the school or district about student learning to deepen understanding about how to refine the practices that support it:
 - Accessing student voices;
 - Action research;
 - Classroom walk-throughs;
 - Instructional rounds;
 - Analyzing student work samples;
 - Analyzing student data;
 - Shadowing students;
 - Critical friends groups;
 - Using protocols to structure learning and interaction;
 - Examining educator work products;
 - Coaching, mentoring, peer coaching, and peer visitation;
 - Collaborative development and scoring of student assessments;
 - Collaborative inquiry groups;
 - Whole-faculty study groups;
 - Instructional rounds;
 - Peer visitations; and
 - Video clubs.
2. Gathering and using information about educator practice to reflect on and refine it:
 - Classroom walk-throughs;
 - Instructional rounds;
 - Portfolios for educators;
 - Video clubs; and
 - Collaborative planning.

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3. Developing expertise on content, content standards, curriculum, and assessment:

- Action research;
- Lesson study;
- Curriculum development;
- Formative and summative assessment development;
- Case discussions;
- Standards in practice;
- Study groups; and
- Child study groups.

Planning for Implementation

After selecting, adapting, or designing a professional learning program or intervention, yet before implementation, planners attend to the Learning Designs, Data, and Outcomes standards of the Standards for Professional Learning. They also focus attention on four other core attributes of successful professional learning, namely, Learning Communities, Leadership, Resources, and Implementation standards. These standards, listed below, (1) set expectations for developing the culture in which learning occurs, (2) establish the role of leaders in leading learning, (3) stress the importance of intentionally supporting full implementation, and (4) ensure the resources are available to achieve the intended outcomes for both educators and students.

Learning Communities. Professional learning that increases educator effectiveness and results for all students occurs within learning communities committed to continuous improvement, collective responsibility, and goal alignment;

Leadership. Professional learning that increases educator effectiveness and results for all students requires skillful leaders who develop capacity, advocate, and create support systems for professional learning;

Resources. Professional learning that increases educator effectiveness and results for all students requires prioritizing, monitoring, and coordinating resources for educator learning;

Implementation. Professional learning that increases educator effectiveness and results for all students applies research on change and sustains support for implementation of professional learning for long-term change.

Plan Professional Learning Implementation and Evaluation

To complete the professional learning plan, planners look several years into the future to consider the following:

- What kind of support does the program need to be successful?
- How will we support the individuals with different learning needs or who are indirectly associated with this professional learning plan?
- What are we equipped to do to support and implement the professional learning, and what external resources will we need? What resources are we dedicating to the professional learning?
- What is our timeline for full implementation?
- What benchmarks along the way will help us know whether we are successful?
- To what degree are we willing to commit time, energy, staff, technology, materials, and funding to this effort for the long term?
- How will we align this new initiative with existing ones?
- What might we need to eliminate to make resources available for this program?
- How closely do the goals of the professional learning align with our school's improvement goals and the district's strategic goals?
- How will we assess how the program is initiated, implemented, and sustained?

Planning for Evaluation

If the team develops an evaluation plan while they plan for the professional learning program, it may lead to more carefully planned program and a stronger evaluation. Considering the program and evaluation at the same time allows planners to identify important baseline data to collect—data that may be necessary for measuring the professional learning's impact. It also helps planners set expectations for implementation and identify visible indicators of progress along the way so that both the leaders and learners can assess progress. *Tool 6.3: 8 smooth steps* outlines the evaluation process and offers an example of a professional learning program. *Tool 6.4: Connecting all the pieces: Mosaic approach to evaluation* paints a complete picture and offers an example of an evaluation of professional learning.

Those who develop the professional learning plan will most likely consider how to evaluate the effectiveness of professional learning or they may be asked only to identify indicators of success that evaluators or other staff in charge of evaluation will use. The purpose of the evaluation also determines a great deal about the rigor of the evaluation. If the evaluation is for internal purposes to measure achievement of the goals and make improvements in professional learning practices, a practitioner-based evaluation can be used. In this case, learners may be actively engaged in the data collection and analysis phases of the evaluation. If the evaluation is for external purposes, such as for grants received, and requires a more rigorous process, enlisting the support of a qualified evaluator is recommended.

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The Data standard addresses evaluation of professional learning:

Professional learning that increases educator effectiveness and results for all students uses a variety of sources and types of student, educator, and system data to plan, assess, and evaluate professional learning. (Learning Forward, 2011, p. 36)

To guide the planning of the evaluation, the evaluator uses the SMART goals and objectives, the theory of change, and the logic model to develop formative and summative evaluation questions. *Tool 6.5: Sample logic model for collaborative professional learning teams* will provide the evaluator or designer with a logic model, and *Tool 6.6: Sample evaluation questions and evidence* offers a framework for posing questions and identifying evidence that would answer the questions. When planning to evaluate a professional learning intervention, leaders do the following:

1. Assess the professional learning plan to determine if it is thorough, well-conceived, and able to be implemented, (i.e. check to see if resources available to support its success);
2. Identify key questions they hope to answer; and
3. Design the evaluation framework—the plan for conducting the evaluation.

Evaluation framework. An evaluation framework includes identifying what data will be collected, sources of that data, who will conduct the evaluation, and a timeline (Killion, 2008). Plans should include both formative and summative evaluations. A formative assessment allows professional learning leaders to know how well the program is being implemented, identifies opportunities for adjustments, and answers questions such as:

- Are the program activities being implemented as planned?
- Are resources adequate to implement the program as planned?
- To what degree are planned changes, i.e. initial and intermediate outcomes, occurring in implementation that may influence achievement of the program's goals?
- What adjustments are needed in the program's actions to address unanticipated challenges and increase the likelihood of achieving the intended goals?

A summative evaluation allows learners and leaders to know whether the professional learning had the intended impact. A summative evaluation answers questions such as the following:

- Has the learning achieved the intended results?
- What changes for educators have resulted from the professional learning?
- What changes for students have resulted from the professional learning?
- What changes in the school, school system, or education agency have resulted from the professional learning?

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When a more formal or rigorous evaluation is needed, the evaluator should be closely involved in planning the professional learning. This collaborative approach gives professional learning leaders and the evaluator greater clarity about how the professional learning is intended to work, increasing the likelihood that professional learning will be implemented as designed and that the intended results will be realized. *Tool 6.7: Mapping an evaluation step by step*, outlines the process for planning the evaluation of a professional learning program and can serve as a process map. *Tool 6.8: Evaluation framework* will guide users in determining the purpose of the evaluation and then developing a formative or summative evaluation as appropriate. Another useful resource to guide the evaluation of professional learning is *Teacher Professional Development Evaluation Guide* is: www.learningforward.org/docs/pdf/evaluationguide.pdf?sfvrsn=0.

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Tools for Planning Professional Learning Implementation and Evaluation

Tool	Tool Title	Description
6.1	Peer observation practices and implications	This observation tool helps the user reflect on ideas gained from visiting a colleague’s classroom.
6.2	Start-continue-stop doing template	This tool guides the user in reflecting on a colleague’s practice to identify what to introduce, continue, and stop doing in his or her own teaching practices.
6.3	8 smooth steps: Solid footwork makes evaluation of professional learning programs a song	This article outlines a process for evaluating the impact of professional learning on student achievement and includes a sample theory of change, logic model, and evaluation framework.
6.4	Connecting all the pieces: Mosaic approach to evaluation makes a complete picture	This article demonstrates how professional learning program directors used a variety of approaches to determine how professional learning made an impact on teachers and students.
6.5	Sample logic model for collaborative professional learning teams	This table displays a sample logic model for teacher collaborative professional learning.
6.6	Sample evaluation questions and evidence	This sample identifies evaluation questions for educator learning goals and sample evidence for answering the questions.
6.7	Mapping an evaluation step by step	This tool includes a process map for planning, conducting, and reporting an evaluation of professional learning.
6.8	Evaluation framework	This example evaluation framework guides planners in developing a summative or formative evaluation of professional learning.

Implement, Evaluate, and Sustain Professional Learning

Careful and thorough planning contributes to the success of professional learning. As with any new initiative, launching professional learning requires constant nurturing and support for it to be implemented at a high level. When the professional learning plan moves from a planning process into an action process, everyone has responsibility for its success. Professional learning leaders, including state and regional education agency staff, district administrators, principals, teacher leaders, and teachers assume responsibility for monitoring and making adjustments to professional learning so that it has an impact on practice and student outcomes. Professional learning participants actively design, shape, apply, analyze, and reflect on their learning. They give constructive feedback to one other and facilitators about the learning designs they are using and about their learning progress. Facilitators of professional learning seek feedback on their efforts, examine data collaboratively with colleagues to assess the efficiency and effectiveness of professional learning, and adjust their facilitation to support adult learners' success. Supervisors engage with learners to set high expectations, solve challenges of implementation, provide adequate implementation support and feedback, and assess progress of the learning and its implementation. The primary focus is on sustaining support over a substantial period of time to ensure deep implementation and refined level of use.

Step Seven includes two critical processes: (a) implementation, assessment, and monitoring and (b) evaluation. Implementation focuses on ensuring that learners are able to implement their learning. This means that they feel confident and competent to enter into early-stage implementation, and have the commitment to sustain implementation until they develop expertise. Both learners and those who support them—coaches, peers, supervisors, and experts—make time to identify and address barriers and celebrate successes. The continuous focus on implementation and refinement leads to high levels of success.

The process of assessment and monitoring, with formative evaluation, includes gathering evidence about the frequency and quality of implementation, providing continuous feedback, and adjusting support to refine practice. Evaluation includes summative judgment about the effectiveness and results of the professional learning. Evaluation measures achievement of goals, but also provides valuable information for improving future professional learning design, implementation, and evaluation.

Implementation takes commitment and persistence on the part of implementers. They must have a clear understanding of what is expected of them and a willingness to engage in the practices. While some research suggests that attitudes or belief in the value of a practice emerges as evidence about the success of the practice grows (Guskey, 2002), implementers develop both a level of belief (Attitudes) and willingness (Aspirations) after they engage in practice.

Implement, Evaluate, and Sustain Professional Learning

Tools for Setting Expectations

To succeed in implementing new practices, those responsible for implementation also need a clear understanding of what high-quality performance means and looks like. One tool for reaching agreement on an acceptable level of implementation is an Innovation Configuration (IC) map. IC maps describe and define the specific practices related to an innovation so that when implementing or supporting implementers there is a common understanding about what it means to implement and what varying levels of implementation look like in practice to guide continuous improvement (Hall & Hord, 2011). *Tool 7.1: Implementation: Learning builds the bridge between research and practice* is an article by Gene Hall and Shirley Hord on the important role of supporting implementation for successful professional learning.

Studying an IC map is one way to understand value. The Kentucky Department of Education, Appalachia Regional Education Laboratory, and Learning Forward collaborated on developing an IC map for district responsibilities to support the four pillars of reform in Kentucky. Those pillars included Leadership, Characteristics of Highly Effective Teaching and Learning, Standards, and Assessments at www.learningforward.org/docs/default-source/commoncore/kyccss_icmaps.pdf?sfvrsn=2.

Tool 7.2: Clarify your vision with an Innovation Configuration map describes the components of an Innovation Configuration map as well as strategies for designing IC maps. *Innovation Configuration maps: Teacher* is an IC map that delineates teachers' responsibilities for implementation of Standards for Professional Learning. It can be downloaded at www.learningforward.org/docs/standards-for-professional-learning/teacher-icmaps.pdf. *Innovation Configuration maps* for other roles including coaches, school leadership teams, principals, directors of professional learning, central office staff, superintendents, local school boards, education agency staff, institutes of higher education, external partners, and education agency staff can be purchased at https://store.learningforward.org/mm5/merchant.mvc?Session_ID=8fbba35ffb2e28fc2822aa5141cf01d7&Store_Code=L4W&Screen=CTGY&Category_Code=Standards.

Setting clear expectations for acceptable implementation will make a significant difference in the quality of implementation; however, implementation that is not assessed or monitored is unlikely to happen. In some cases there are no clear expectations for implementation because the professional learning objectives focus insufficiently on application of professional learning. In other cases there is inadequate support for implementation. Consequently, when learners receive no support for their questions about how the learning applies to their specific situation, they tend to abandon new learning for what is familiar.

Implement, Evaluate, and Sustain Professional Learning

Assessment and Monitoring

Implementation requires continuous assessment and monitoring. Both practices provide data to continually improve practice and the professional learning supports available to increase the likelihood that the application of professional learning will achieve the results intended. If the professional learning is not implemented, it will have little chance of improving practice or results for students.

Assessment and monitoring include both self-, peer-, and supervisor-led analysis and reflection. Individuals use their personal experience, responses from student or their immediate clients (e.g. teacher-student; coach-teacher; principal-teacher; central office-principal) to ask and answer the following questions:

- What worked and how do I know it?
- What didn't work as well as expected and how do I know that?
- What will I continue doing, stop doing, and start doing?
- What did I learn that will help me as I continue to refine my practice in this area?
- What support do I want and how will I access it?

Observation tools. Supervisors and peers use tools such as an Innovation Configuration map to provide feedback to individuals and teams about their implementation. By collecting information about implementation, those responsible for professional learning can make necessary adjustments along the way to strengthen the learning and implementation support.

Most states are developing observation guides for collecting information during performance observations. While these tools may provide useful information about general practices, they often fail to delineate the specific practices associated with specific professional learning initiatives. If, for example, classroom observation is a part of the measurement of implementation of teacher professional learning, it will be important to have observation guidelines that align strongly with the specific practices teachers are learning to use.

Two reliable and valid observation tools for specific professional learning initiatives are available for use for science and literacy programs. First, the *Reformed Teaching Observation Protocol* is used in conjunction with reformed teaching practice, which shifts classrooms from teacher-directed environments to student-centered, collaborative, activity-based environments. The practice and protocol emerged from *Project 2061: Science for All Americans*, an initiative of the American Association for the Advancement of Science at www.project2061.org/publications/sfaa/default.htm.

Implement, Evaluate, and Sustain Professional Learning

Another example is the adolescent literacy instruction program observation tools for reading and writing lessons at www.learningpt.org/literacy/adolescent/observation.php. These tools are designed for non-evaluative observation by peers and coaches to support implementation of new instructional practices to increase adolescent literacy (Learning Point Associates, 2013). Each of these tools is specific to educators' professional learning and yield data to refine practice and improve results.

Finally, implementers can use the three diagnostic tools of the Concerns-Based Adoption Model (CBAM) to monitor staff members' uses and responses to implementation. Leaders can use the data to give staff the support they need to implement a professional learning intervention successfully. The diagnostic dimensions of CBAM are as follows:

Innovation Configurations. An Innovation Configuration map provides a clear picture of the range of implementation from poor or nonexistent to high-quality implementation. Innovation Configuration maps are particularly useful tools for providing self-assessment and coaching because they delineate specific practices aligned with the new learning.

Stages of Concern. The Stages of Concern process includes a questionnaire, interview, and open-ended statements. Leaders can use the tool to identify staff members' attitudes and beliefs about a professional learning intervention. With that knowledge, leaders can take action to address specific concerns.

Levels of Use. The Levels of Use is an interview tool that leaders can use to determine how well staff members are using, either individually or collectively, a professional learning program. Used with the IC map and direct observation can help leaders and communities of colleagues implement an intervention.

Resources developed by SEDL are also helpful in assessing level of use and stages of concern about an innovation to guide improvements and added supports to strengthen results. Hall and Hord's (2011) *Implementing Change: Patterns, Principles and Potholes* is one source of information about these tools, as are the following websites:

Measuring Implementation in Schools: Innovation Configurations

www.sedl.org/pubs/catalog/items/cbam19.html

Measuring Implementation in Schools: Stages of Concern Questionnaire

www.sedl.org/pubs/catalog/items/cbam17.html

Measuring Implementation in Schools: Levels of Use

www.sedl.org/pubs/catalog/items/cbam18.html

The value of tools such as these is that they provide a way to assess how professional learning is being implemented. If it is not being implemented, those responsible for the success of professional learning need to examine possible reasons for a lack of implementation and determine what actions to take to change this current state.

Implement, Evaluate, and Sustain Professional Learning

Evaluate Professional Learning

Summative evaluation provides information about the impact of professional learning and offers valuable data to improve professional learning planning, system, and results. Table 5 summarizes the various levels of evaluation questions to consider answering about professional learning.

Table 5. Levels of Evaluation Questions

Levels 1–6	Sample Evaluation Questions	Value of Information	Frequency of Use	Difficulty of Assessment
		Least valuable	Frequent	Easy
1. Measuring reaction to the learning experience (Guskey, 2000; Kirkpatrick, 1998)	Were participants satisfied with the learning experience?			
2. Measuring learning (Guskey, 2000; Kirkpatrick, 1998)	What did participants learn?			
3. Assessing organizational support and change (Guskey, 2000)	How has the culture of the school changed?			
4. Assessing application of learning (Guskey, 2000; Kirkpatrick, 1998)	How often are participants implementing the new practices?			
5. Assessing student learning (Guskey, 2000; Kirkpatrick, 1998)	Has student’s achievement increased?			
6. Calculating return on investment (Phillips, 1997)	What is the fiscal return on stakeholders’ investment?			
		Most valuable	Infrequent	Difficult

Source: Evaluation questions address different levels of effects. *Assessing Impact: Evaluating Staff Development* (p. 39), by J. Killion, 2008, Thousand Oaks, CA: Corwin Press. Copyright 2008 by Corwin Press.

Implement, Evaluate, and Sustain Professional Learning

Each level provides a unique type of information, yet not all levels provide essential impact information. Assessing the impact of professional learning requires moving to the higher levels. Too often those responsible for evaluating professional learning are satisfied with collecting feedback about learners' satisfaction with the learning experience (Level 1). Yet this information provides no evidence about learners' use of the learning or its impact on their practice or on their students.

To evaluate the impact of professional learning, it is essential to collect several distinctly different types of data and interpret them in way that suggest or construct a claim of relationship. The tools of Step Six can be used for designing summative evaluations of professional learning interventions.

Learning. What do learners know and what are they able to do as a result of their learning? Using pre- and post-tests can provide information about what educators learn and what skills they have gained. A useful tool for self-reporting learning appears in *Tool 7.3: Rising stars for all*.

Sustain implementation. If there are clear, valid, and reliable criteria for observing implementation, the observation data will be stronger and learners will understand what effective implementation looks like. Implementers or evaluators use tools such as IC maps, observation rubrics, look-fors, and work samples to collect evidence of implementation. Student work, school improvement plans, collaborative team minutes, etc. are examples of data that can substitute for direct observations.

Walk-throughs help administrators, teacher leaders, coaches, and district leaders and teams of teachers gather information about instructional strengths and needs and provide a framework for using that information to discuss instruction, monitor how professional learning is implemented, and measure its effect on classroom practices. Teacher leaders, administrators, leadership experts, curriculum and instructional specialists, and content experts might gather together to identify the content knowledge, instructional skills and practices, and dispositions educators need to achieve the student achievement goals. In addition, they might use their list as a basis for an interview or discussion with educators to determine educators' strengths and areas for growth. Feedback or data from educator evaluations may also be used to identify educators, supervisors, peers, coaches, or others. *Tool 7.4: Collaborative professional learning team walk-through guide* may be used to give feedback to teams on their collaborative work.

Impact. What is changing as a result of the implementation? What conditions are changing? What is evident in the behavior and academic performance of students on formative and summative assessments? What other changes are evident?

Measures of success such as student work samples, formative or summative student assessments and culture, culture surveys are some types of data that provide evidence of impact. Impact evaluations will be stronger if baseline or data collected before the professional learning are available for comparison.

Implement, Evaluate, and Sustain Professional Learning

Sustain implementation

The value of professional learning accrues when that learning becomes routine practice. Sustaining implementation requires persistent attention. Leaders must focus on fine-tuning the application of learning by providing constructive feedback, analytic reflection, continuous learning, and reinforcing their commitment to achieving high levels of mastery with new learning. Yet, too few educators invest in deep implementation of professional learning. Professional learning plans that integrate an intentional focus on sustaining implementation spread differentiated support over three to five years, and they incorporate coaching, feedback, extended learning, and formative assessment.

Tools for Implementing, Evaluating, and Sustaining Professional Learning

Tool	Tool Title	Description
7.1	Implementation: Learning builds the bridge between research and practice	This article provides background information useful in planning to support implementation.
7.2	Clarify your vision with an Innovation Configuration map	This newsletter contains an overview about Innovation Configuration maps, guidelines for developing one, and a sample IC map.
7.3	Example survey for 6 + 1 Traits™ of Writing	This survey is a model of a data collection instrument for assessing progress and impact of professional learning.
7.4	Collaborative professional learning team walk-through guide	This guide outlines areas of focus for walk-throughs of collaborative professional learning teams.

Professional learning drives change. When educators learn, students learn.

Yet, professional learning often is ill-conceived and poorly executed, thereby producing limited results for educators or students. Effective professional learning that increases educator effectiveness and student results requires thoughtful planning, implementation, monitoring, and evaluation.

When educators guide and align that process with the Standards for Professional Learning, changes in educator practice and student outcomes are more likely to occur. Just as important, effective professional learning is conceived within an overall comprehensive professional learning system and aligned with other school system and school improvement initiatives.

Tools

Introduction

TOOL i Back to Studying Professional Learning Plans Tools Chart

Websites to sample professional learning plans

Use this list to investigate core elements, organization, and layout of professional learning plans.

Purpose	Gain familiarity with a wide variety of professional learning plans.
Time	60 minutes
<p>The team might want to divide up the websites or identify others to review to learn about how various states, school systems, schools, and individuals construct professional learning plans. The table includes a wide range of resources on professional learning plans. The sites provided are examples of plans for the purpose of studying their components and design and not necessarily offered as exemplars.</p>	
Option One	<ol style="list-style-type: none"> 1. Assign each pair two sites to review and ask them to collect some common data from the site. Possible data to collect are list below: <ol style="list-style-type: none"> a. Components of the plan b. Length of the plan c. Degree of specificity of the plan d. Requirements for developing the plan e. Other areas 2. Ask members to come back to the whole group to report what they learned. 3. Record ideas that members want to keep in mind as they develop their own professional learning plans.
Option Two	<ol style="list-style-type: none"> 1. Assign two to three plans to a small group of the comprehensive professional learning system team and ask them to do a comparison across the plans. Ask them to be prepared to answer the following questions: <ol style="list-style-type: none"> a. How are the plans alike? b. How are they different? c. What aspects of each plan make it a viable plan? 2. Ask members to present their comparison to the whole group. 3. Invite comprehensive professional learning system team members to summarize what they learned from their own and their colleagues' analysis.

TOOL i, cont.

Sample Professional learning Plans and Templates

Location	Title	Web link	Notes
State frameworks			
Florida	<i>Professional Development System Evaluation Protocol</i>	www.fldoe.org/profdev/pdf/pdsprotocol.pdf	
New Hampshire	<i>Statewide Professional Development Master Plan</i>	www.education.nh.gov/certification/statewide_prof.htm	
Iowa	<i>Iowa Professional Development Model</i>	http://educateiowa.gov/index.php?option=com_content&task=view&id=232&Itemid=1286	
Vermont	<i>A Guide for Increasing the Effectiveness of Professional Development in Schools and Districts</i>	http://education.vermont.gov/documents/EDU-Guide_for_Increasing_the_Effectiveness_of_Professional_Development.pdf	
Oregon	<i>Title II A Professional Development</i>	www.ode.state.or.us/search/page/?id=2223	
Missouri	<i>Missouri Professional Development Guidelines for Student Success</i>	http://dese.mo.gov/divteachqual/leadership/pd_guidelines/	
New Jersey	<i>A Guidance Document for the School Professional Development Plan</i>	www.nj.gov/education/profdev/pd/teacher/pdguidance_school.pdf	
New Jersey	<i>A Guidance Document for the District Professional Development Plan</i>	www.state.nj.us/education/profdev/pd/teacher/pdguidance_district.pdf	
School system frameworks			
Duval County Public Schools, Jacksonville, FL	<i>School Professional Development Plan Template and Sample</i>	www.duvalschools.org/static/aboutdcps/departments/acadprog/riverdeep/SchoolPDP_template_and_Sample.pdf	
Duval County Public Schools, Jacksonville, FL	<i>School Professional Development Plan Template and Sample</i>	www.duvalschools.org/static/aboutdcps/departments/acadprog/riverdeep/SchoolPDP_template_and_Sample.pdf	

TOOL i, cont.

Location	Title	Web link	Notes
School system frameworks (continued)			
Chatham Central School District, Chatham, NY	<i>Chatham Central Schools Professional Development Plan, 2011–2012</i>	www.chathamcentralschools.com/district/nys_district_plans/professional_development_plan.pdf	
Dickinson Public Schools, Dickinson, ND	<i>Professional Development Plan 2010–2011</i>	www.dickinson.k12.nd.us/curriculum_resources/professional_development_plan_2010_2011.pdf	
Guilderland Central School District, Guilderland, NY	<i>Guilderland Central School District Professional Development Plan</i>	www.guilderlandschools.org/district/pubs/districtplans/PDP.pdf	
Seattle Public Schools, Seattle, WA	<i>Seattle Public Schools Teacher Professional Development Plan 2010–2011</i>	http://professional-development.district.seattleschools.org/modules/locker/files/get_group_file.phtml?fid=9994402&gid=2213995&sessionid=e905d4863f70ac70498b22a0b20027c1	
Minneapolis Public Schools, Minneapolis, MN	<i>Five-Year Comprehensive Professional Development Plan 2011–2016</i>	http://staffdev.mpls.k12.mn.us/uploads/mps_pd_plan_final.pdf	
Tulsa Public Schools, Tulsa, OK	<i>Master Plan for Professional Development October 2011</i>	www.tulsaschools.org/8_Employees/01_PROFESSIONAL_DEV/pdf/PDmasterplan.pdf	
North Reading Public Schools (Mass.) 2012–13 Professional Development Plan	<i>North Reading Public Schools Professional Development Plan 2012–2013</i>	http://ps.north-reading.k12.ma.us/Pages/NRSDDistrict_News/076E2F5B-007EA7AB.0/	
My Learning Plan Resource Documents	<i>Creating Effective District Professional Development Plans</i>	http://www.mylearningplan.com/content/Docs/MLP_Learning_Paper_Creating%20PD%20Plans.pdf	

TOOL i, cont.

Location	Title	Web link	Notes
School Plan Frameworks			
Duval County Public Schools, Jacksonville, FL	<i>School Professional Development Template and Sample</i>	http://www.duvalschools.org/static/aboutdcps/departments/acadprog/riverdeep/SchoolPDP_template_and_Sample.pdf	
New Jersey Department of Education, Trenton, NJ	<i>A Guidance Document for School Professional Development Plan</i>	http://www.state.nj.us/education/profdev/pd/teacher/pdguidance_school.pdf	
Pennsylvania Department of Education Bureau of Career and Technical Education, Harrisburg, PA	<i>Implementing a School-wide Professional Development Plan</i>	http://www.portal.state.pa.us/portal/server.pt/document/1244830/bpi_plcprofgrowth_pdf	
Individual Plans			
Missouri Department of Elementary and Secondary Education, Jefferson City, MO	<i>Sample Professional Development Plans and Logs</i>	http://dese.mo.gov/divteachqual/leadership/pd_guidelines/documents/ProfessionalLearningGuidelinessection5withcover.pdf	
Vermont Northern Lights Career Development Center, Montpelier, VT	<i>IPDP-Individual Professional Development Plan</i>	http://northernlightscdc.org/career-pathways/ipdp-individual-professional-development-plan/	
Duval County Public Schools, Jacksonville, FL	<i>Individual Professional Development Plan 2012–2013</i>	http://www.duvalschools.org/static/aboutdcps/departments/prodev/downloads/IPDP_2012-13_Gr10_Intensive_Reading.pdf	
Educational Service Center of Lake Erie West, Toledo, OH	<i>Sample Individual Professional Development Plan Goals</i>	www.eslakeeriewest.org/files/Sample-Goals.pdf	

Analyze Student Learning Needs

TOOL 1.1 Back to Analyzing Student Learning Needs Tools Chart

Student data analysis protocols

The Numbers Game: Measure progress by analyzing data

By Joan Richardson

If a district or a single school has a vision of what it wants to be, the use of data can be a powerful tool to measure its progress along the way.

Sylvie Hale has seen the power of using data in that way. “Schools have to collect data to make sure they’re on target. Data do not lie,” she said.

Ask Hale, senior research associate at WestEd, for an example of how using data guided a school to fulfill its vision and she’s ready with a handful of stories. This is one of her favorites:

A rural California school district had a goal of ensuring that all children would read at grade level by 3rd grade. Teachers in one school were quite discouraged because many 1st and 2nd graders were reading below grade level. How could they meet the district goal if children were falling behind so early?

Teachers quickly decided that the school needed a new reading program.

Hale and other consultants from a regional assistance center urged the school to look over its data very closely. Perhaps the school would discover that the curriculum wasn’t the only reason students were struggling with reading.

After receiving some preliminary school data, teachers discovered that a majority of kindergartners had been absent for more than half the year. That must mean that parents don’t care enough about education to get them to school, teachers concluded.

The consultants pushed them to look at other possible explanations for missing school.

The teachers talked with parents of students with high absenteeism and learned that these children rode a bus to school but that the district provided no bus transportation to take them home at the end of their half-day in school. The buses were needed to transport high school students and the district did not want to mix high schoolers with kindergartners. Working parents or parents who relied on others for after-school transportation frequently kept children home rather than deal with the transportation hassle.

Clearly, the reading curriculum was not at fault. When providing transportation for these kindergartners turned out to be financially unfeasible, the teachers explored other options. By the next school year, the

Analyze Student Learning Needs

TOOL 1.1, cont.

school created a remedial reading program was diverted to pay for extra teacher hours. At last report, the reading of these students was improving.

What’s the lesson? “Check your assumptions at the door,” said Hale.

“I don’t think that’s an uncommon story. We all make quick assumptions. Instead, we need to look at data, generate questions and find answers. Data keep you honest,” she said.

A Data Plan

Let’s assume that district’s vision includes a statement that all children will read at grade level by 3rd grade and remain at grade level every year thereafter. How could you use data to measure your progress towards achieving that vision?

<p>Step 1. Collect basic information</p>	<p>Every school should maintain basic data on student demographics and achievement. See the Student Data Checklist on page 58 for a guide to collecting information that will give you a snapshot of students in your school.</p> <p>Break down this information by grade. Keep the original data available so you can cross-reference it with other data in later steps.</p>
<p>Step 2. Identify additional data.</p>	<p>To check on students’ reading ability in your school, what data will you need to collect?</p> <p>To measure academic performance, a school would probably collect, at a minimum, standardized test scores, grades, and classroom assessments. You should always collect at least three types of data for any study.</p> <p>Identify who will be responsible for collecting this data and set a date for finishing this task.</p>
<p>Step 3. Disaggregate the data.</p>	<p>Assemble the academic performance data and disaggregate it according to the characteristics collected under Step One. At a minimum, you should break down each type of data by gender, race, socioeconomic factors, attendance, mobility, discipline issues, and English language ability.</p> <p>Use the Data Summary Sheet on page 61 for this process. Prepare one sheet for each type of data you collect.</p>
<p>Step 4. Analyze the data.</p>	<p>After you’ve filled out the Data Summary Sheets, begin to ask questions about that data.</p> <p>What is the lowest performing group? What is the highest performing group? Are boys and girls performing equally well in reading? Are there dips in reading achievement between different grades?</p> <p>If so, which grades? What are the reading levels of various language groups? Do different socioeconomic groups have different reading levels? Are reading levels similar between various racial and ethnic groups?</p>

Analyze Student Learning Needs

TOOL 1.1, cont.

<p>Step 5. Summarize the data.</p>	<p>Describe in a statement what the data tell you. These statements can be called either data summary statements or needs statements. See sample statements on page 60.</p> <p>In this step, the school team is trying to identify the problem, not solve it. This forces individuals to spell out what they see and not fall back on assumptions, Hale said. Write one statement or write a dozen summary statements, depending on your observations.</p> <p>At this stage, avoid the urge to brainstorm solutions. That step will come later. For now, concentrate on simply describing your observations.</p>
<p>Step 6. Brainstorm causes.</p>	<p>Once a school team has objectively evaluated the data, the next step is to suggest possible explanations.</p> <p>What’s going on instructionally? What’s going on with the curriculum? Where are the gaps? Why do these gaps exist?</p> <p>“If you’re not getting the results you want, there’s dissonance someplace. Where is the dissonance?” Hale asks.</p> <p>For example, a staff may suggest that the curriculum is not aligned with the assessment or that teachers lack sufficient training to implement the curriculum appropriately.</p>
<p>Step 7. Collect more data.</p>	<p>After the team has suggested explanations for blips in the data, the next step is to collect more data to determine which explanations are most accurate.</p> <p>For example, if the team hypothesizes that the curriculum has not been implemented completely, the team might survey teachers about their practices as well as observe relevant classes.</p>
<p>Step 8. Analyze and summarize data.</p>	<p>As it did with the student data, the team now analyzes the data it has collected regarding instruction and curriculum.</p> <p>The team repeats the process of writing objective statements about the data it has collected.</p>
<p>Step 9. Identify a goal.</p>	<p>After the data has been analyzed and summarized, the team now needs to identify its goals. See page 62 for a tool to help with this.</p> <p>Write a specific, measurable and attainable goal. What would you consider success? How will you measure that? When will you measure that?</p>
<p>Step 10. Repeat the process.</p>	<p>Once the goal has been identified, the process has not ended. The team needs to establish a time table for repeating the process of collecting and analyzing the data. This forces the team to stay focused on measuring its progress.</p>

But Hale cautions teams against focusing too narrowly on certain areas because of the potential to ignore other areas. “You have to collect data to make sure you’re on target but you also have to look at data to make sure other things aren’t falling through the cracks,” Hale said.

“Data collection and analysis is a continuing process. It never ends. Once you begin asking questions and looking for answers, you find that you have more answers and more questions,” Hale said.

Source: Adapted from “The Numbers Game: Measure Progress by Analyzing Data,” by Joan Richardson, October/November 2000, *Tools for Schools*, 4(2). Copyright 2000 by NSDC. Adapted with permission.

Analyze Student Learning Needs

TOOL 1.1, cont.

Student data checklist

Student Data Checklist	Grade Level				
Enrollment					
Total number of registered students.					
Number of students in special programs (e.g. Title 1, IEP, gifted and talented) broken down by category.					
Number of students broken down by ethnicity, language group or other meaningful categories.					
Daily Attendance					
Average daily attendance of students by grade, grade span, whole school, or other enrollment category.					
Percent of students tardy for classes.					
Number of students who have been absent from school 21 days or more.					
Mobility/Stability					
Mobility rate: percent of children who move in and out of a school during a year.					
Stability rate: the percent of students who remain in the same building for the entire year.					
Socioeconomic Status (SES)					
Percent of students receiving free or reduced-price lunch.					
Average level of parents' education and/or household income.					
Unemployment rates in the attendance area.					
Student Behavior					
Number or percentage of discipline referrals or incidents.					
Number or percentage of student suspensions and expulsions.					
Frequency of gang-related, substance abuse, or other at-risk behavior.					
Limited English Proficiency					
Percent of students with limited English proficiency.					
Percent of families who speak English as a second language.					

Source: *Comprehensive School Reform Research-Based Strategies to Achieve High Standards* by Sylvie Hale, 2000, San Francisco: WestEd. Copyright 2000 by WestEd.

Analyze Student Learning Needs

TOOL 1.1, cont.**Crafting data summary statements**

Comments to facilitator: This activity will assist the team in focusing on what it has learned from the data it has collected about the school. As the team compares this data to its vision for the school, it should be able to identify the steps the school needs to take to reach identified goals.

Materials: Several copies of the data summary sheet, various data sources, chart paper, markers, pens.

Directions:

1. Complete the Data Summary Sheet (see page 61) for each of your data sources. Be as complete as possible. Think about other possible summary tables that might also be created. For example, after completing the sample data summary sheet, you may notice that girls in 4th through 6th grades are underachieving in mathematics. You could create another data summary table in which you break out the girls by ethnicity to see if a pattern emerges.
2. Summarize the data by writing a statement based on the data. As you review the data, consider:
 - Which student sub-groups appear to need priority assistance, as determined by test scores, grades, or other assessments? Consider sub-groups by grade level, ethnicity, gender, language background (proficiency and/or home language), categorical programs (e.g., migrant, special education), economic status, classroom assignment, years at our school, attendance.
 - In which subject areas do students appear to need the most improvement? Also, consider English language development.
 - In which subject areas do the “below proficient” student sub-groups need the most assistance?
 - What evidence supports your findings?
3. For each data summary statement, brainstorm all the possible reasons why the data show what they do. For each reason, identify data or facts that support that assertion. If no data exist, determine how to locate data that would support the assertion. Continue asking “why” until the root cause of the problem or need has been identified.

Analyze Student Learning Needs

TOOL 1.1, cont.

Crafting data summary statements example

Data summary statement:

Fourth-grade Vietnamese immigrant boys are underachieving in science.

Evidence:

Achievement scores, teacher observation, and chapter (textbook) tests.

Why questions:

Q: Why do 4th grade Vietnamese immigrant boys underachieve in science?

A: They have difficulty with English language. (Supporting data or facts: language assessment.)

Q: Why does the fact that Vietnamese boys have difficulty with English contribute to low performance in science?

A: They have difficulty understanding the concepts and applying them in practice. (Supporting data or facts: observation and student input.)

Q: Why do 4th grade Vietnamese immigrant boys underachieve in science?

A: Curriculum does not match assessment. (Supporting data or facts: Curriculum is based on 1985 framework, assessment is based on 1995 framework.)

Q: Why does the mismatch between curriculum and assessment contribute to the low performance in boys?

A: There is misalignment between what is taught and what is being assessed. (Supporting data or facts: comparison of 1985 and 1995 frameworks.) Upon further examination, all students are having some difficulty in science.

Source: *Comprehensive School Reform Research-Based Strategies to Achieve High Standards* by Sylvie Hale, 2000, San Francisco: WestEd. Copyright 2000 by WestEd.

Analyze Student Learning Needs

TOOL 1.1, cont.

Data summaries

Data type: _____
(e.g. enrollment, student achievement, total, attendance, student achievement reading)

Data source/measure: _____
(e.g. SAT9, school records, staff survey)

What the numbers represent: _____
(e.g. percentage of students below grade-level; number of students higher than 4 on district math assessment; percentage of students who say they like to read)

Student Characteristic	Grade Level										Total
Ethnicity											
African-American											
Asian/Pacific Islander											
Caucasian											
Hispanic											
Native American											
Other											
Gender											
Male											
Female											
Income											
Low income											
Not low income											
Language Ability											
Fully proficient											
Limited proficient											
Non-proficient											
English only											
Special Populations											
Migrant											
Title 1 Target Assist											
Special education											
Preschool											
After-school											
Other											

Write a statement summarizing the data collected above. A data summary statement or need statement does not offer a solution nor does it describe a cause or lay blame.

Source: *Comprehensive School Reform Research-Based Strategies to Achieve High Standards* by Sylvie Hale, 2000, San Francisco: WestEd. Copyright 2000 by WestEd.

Analyze Student Learning Needs

TOOL 1.1, cont.

Moving from needs to goals

Comments to the facilitator: This activity will aid you in developing goals based on your identified needs.

Materials: Poster paper, sentence strips, masking tape, markers. The list of data summary statements developed using the Crafting Data Summary Statements tool on page 59 or other method.

Preparation: Prepare a sheet of poster paper with your vision and post that in the room where you are working. Write each data summary statement on a separate sentence strip and post on the wall. Write the model statements listed below on chart paper and be prepared to post those on the wall as you begin your work.

Directions

1. Depending on the size of the group and the number of data summary statements, the facilitator may want to break a larger group into several smaller groups of three or four persons.
2. Each group should transform one statement into a student/program goal. The group should include an objective, outcome indicator, baseline, timeframe, target standard or performance, and target instructional practice. Refer to your vision often as you write these goals.

Student Goal Model

Students in grades 2 through 5 will OBJECTIVE as measured by OUTCOME INDICATOR. Current results indicate that BASELINE. At the end of TIMEFRAME, students in these grades will perform at TARGET STANDARD OR PERFORMANCE, and at the end of two years, they will perform at TARGET STANDARD OR PERFORMANCE.

EXAMPLE

Data summary statement: Most of our upper-elementary students are under-performing in language arts.

Student goal: Our upper-elementary students will improve their language arts skills (OBJECTIVE) as measured by the district assessment and standardized test (OUTCOME INDICATOR). Current results indicate that 67% of students in grades 4–6 are “be low proficient” (BASELINE). By spring 2001 (TIMEFRAME), 25% of students currently under-achieving in language arts—particularly those in upper elementary—will improve their literacy skills by moving from “below proficient” to “proficient” (TARGET STANDARD OR PERFORMANCE).

Program Goal Model

Current records show that BASELINE teachers participated in professional development activities offered by our school this year. By TIMEFRAME our school will OBJECTIVE as measured by OUTCOME INDICATOR. As a result, teachers will offer TARGET INSTRUCTIONAL PRACTICE to these students. At the end of the second year, staff will OBJECTIVE as measured by OUTCOME INDICATOR. As a result, students will perform at TARGET STANDARD OR PERFORMANCE.

EXAMPLE

Data summary statement: Our lowest-performing students in language arts are African-American, particularly males.

Program goal: By the end of the 2000–2001 school year (TIMEFRAME), all staff will have learned about effective instructional practices that accelerate the academic achievement of African-American males (OBJECTIVE). Currently, only 5% of staff have these skills (BASELINE). The following year (TIMEFRAME), all staff will have implemented new strategies (TARGET INSTRUCTIONAL PRACTICE) as measured by peer coaching and classroom observations (OUTCOME INDICATOR).

Source: *Comprehensive School Reform Research-Based Strategies to Achieve High Standards* by Sylvie Hale, 2000, San Francisco: WestEd. Copyright 2000 by WestEd.

Analyze Student Learning Needs

TOOL 1.2 Back to Analyzing Student Learning Needs Tools Chart

Data analysis protocol (informal)

What is being measured in these data?

Who is represented in the data pool?

What jumps out in the data on first glance?

Surprises

Expected

What conclusions can we draw at this point?

What other data have we looked at recently that have suggested similar findings?

What other data might we consider to confirm or disprove these conclusions?

Source: Adapted from *Becoming a Learning School* (Tool 10.4 on supplemental CD), by Joellen Killion and Pat Roy, 2009, Oxford, OH: NSDC. Copyright 2009 by NSDC. Adapted with permission.

Analyze Student Learning Needs

TOOL 1.3 Back to Analyzing Student Learning Needs Tools Chart

Data analysis protocol (formal)

What are we looking at here?

What is being measured in each assessment?

Which students are assessed?

What areas of student performance are meeting or exceeding expectations?

What areas of student performance are below expectations?

Do patterns exist in the data?

Analyze Student Learning Needs

TOOL 1.3, cont.

How did various populations of students perform? (Consider factors such as gender, race, and socioeconomic status.)

What are other data telling us about student performance?

What surprises us?

What confirms what we already know?

Source: Adapted from *Becoming a Learning School* (Tool 10.5 on supplemental CD), by Joellen Killion and Pat Roy, 2009, Oxford, OH: NSDC. Copyright 2009 by NSDC. Adapted with permission.

Identify Characteristics of State, School System, School, Department, and Educators

TOOL 2.1 Back to Identifying Characteristics of State, School System, School, Department, and Educators Tools Chart

Educator and context characteristics

What are the characteristics of the teaching staff?

- Years of experience
- Years at grade level
- Years in the school
- Past experience with professional learning
- Performance/ability
- Sense of efficacy
- Response to change
- Quality of preparation
- Experience in school
- Level of education

What are some characteristics of formal and informal leaders in the school system and in schools?

- Leadership style
- Roles of formal and informal leaders
- Level of participation in leadership activities
- Opportunities to be involved in leadership roles/activities
- Trust in leadership
- Support by leadership
- Support for leadership
- Level of communication

Identify Characteristics of State, School System, School, Department, and Educators

TOOL 2.1, cont.**What are the characteristics of the culture within the school system and schools?**

- Degree of collaboration
- Communication
- Engagement in addressing barriers and challenges
- Transparency of practice
- Trust
- Professional respect
- Governance
- Rituals and procedures
- Openness to change

What are some characteristics of the community?

- Support for education
- Support for the school
- Involvement in school activities
- Support for students
- Support for professional learning

What resources are available to support professional learning?

- Budget
- Time
- Support personnel in the building
- Support personnel outside the building
- Union contract
- Incentives

Develop Improvement Goals and Student Outcomes

TOOL 3.1 Back to Developing Improvement Goals and Student Outcomes Tools Chart

Probing for causes

Convert the first response under each “Why” into the next “Why.” Repeat that process for every response until you have asked “Why” about the response to every question.

Problem or Issue: _____

1st “Why”

1. _____
2. _____
3. _____

2nd “Why”

1. _____
2. _____
3. _____

3rd “Why”

1. _____
2. _____
3. _____

4th “Why”

1. _____
2. _____
3. _____

5th “Why”

1. _____
2. _____
3. _____

Source: Adapted from *Becoming a Learning School* (Tool 9.6 on supplemental CD), by Joellen Killion and Pat Roy, 2009, Oxford, OH: NSDC. Copyright 2009 by NSDC. Adapted with permission.

Develop Improvement Goals and Student Outcomes

TOOL 3.2 Back to Developing Improvement Goals and Student Outcomes Tools Chart

Fishbone diagram

This quality management tool was developed by Kaoru Ishikawa and is sometimes called the Ishikawa Diagram or the Cause-Effect Diagram. It is designed to help take results from data analysis and to identify possible root causes for identified problems. Data identify the problems. They do not identify the cause of the findings until further analysis is conducted. It is through analyzing the probable root causes that teams will find their leverage point.

To use the Fishbone Diagram to identify possible causes of an identified problem, write the problem or current state, in specific terms, in the head of the fish. On the big bones of the fish list major factors that might contribute to the current situation. For example, 65% of the male students are reading two or more grades below level. Some of the major factors related to this problem might be instruction, availability of reading materials, learning styles, and curriculum. It is possible to consider other areas such as demographics, parent involvement, etc., however, spending time working in these areas may not yield actions that school staff can take to address the identified problem. It is important to note that there are external areas of concern, such as the number of male students who live in households headed by females. Yet, this area is not one teachers can change. While it is possible to influence it in some way, identifying this as the root cause leaves teachers little room to act. It is helpful, therefore, to focus the bulk of the root cause analysis on areas of influence, those areas school staff can directly impact through their actions and interactions with students each day at school.

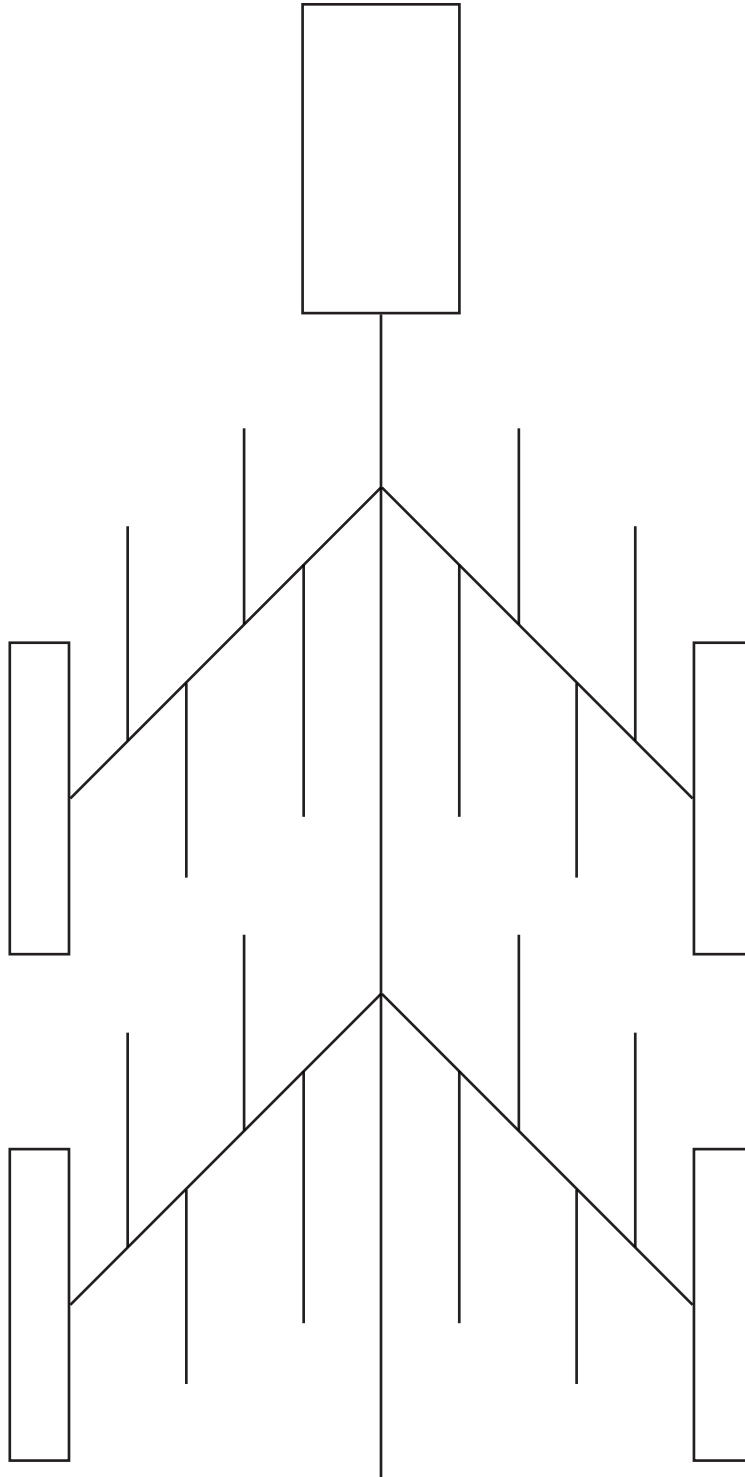
On the small bones of the fish, the team identifies specific areas related to the major factors. For example, for availability of reading materials, teachers might write “classroom and library reading materials of interest to male students.” After identifying as many specific factors as possible, team members circle or mark those factors they believe have the greatest impact on the current state. In essence, they are formulating hypotheses about what might be causing the current state. For example, a hypothesis might sound like this: In classrooms where there are reading materials on topics of interest to males and where students have easy access to these materials, male students’ reading scores are higher than in classrooms where this type of resource is not readily available.

Teams then examine additional data to confirm or disprove their hypotheses until they find one or two that hold up. It is from these hypotheses that they begin their action planning. If in fact the above hypothesis was confirmed, their actions would center on how to make more high-interest reading materials easily accessible to male students.

Page 70 has a blank fishbone diagram template for teams to use with their own problems.

Develop Improvement Goals and Student Outcomes

TOOL 3.2, cont.



Source: Adapted from *Becoming a Learning School* (Tool 10.7 on supplemental CD), by Joellen Killion and Pat Roy, 2009, Oxford, OH: NSDC. Copyright 2009 by NSDC. Adapted with permission.

Develop Improvement Goals and Student Outcomes

TOOL 3.3 Back to Developing Improvement Goals and Student Outcomes Tools Chart

Work SMARTER, not harder: SMART goals keep key objectives in focus

By Joan Richardson

The teacher was skeptical about SMART goals. She had been through planning and goal-setting before. She expected SMART goals to be another addition to her workload that would offer little or nothing to improve what she cared about most, her instruction and her students' learning.

Her middle school set a schoolwide SMART goal of reaching 85% proficiency on the statewide math assessment by 2008. Then, the 7th grade math teachers set their own grade-level SMART goal. She respected her colleagues and she honestly evaluated her teaching to determine what she could do to help the team achieve its goal.

To be faithful to the SMART goals process, the team had agreed to do several benchmark assessments before the statewide assessment. She knew that if too few of her students were proficient on those assessments, she would need to reteach.

And that's when it all began to make sense to her. She discovered that her focus on a few key objectives meant that her students understood concepts more quickly. So, instead of dwelling on some concepts for days or even weeks, she could move on. That meant her students were learning more efficiently and she was able to move more quickly through the curriculum.

Although she had been worried that SMART goals would consume more of her time, she discovered that using the SMART goals actually created more time for her.

This teacher's discovery should not be surprising. Businesses have long used SMART goals as a way to cut through the morass of conflicting priorities and focus their energies on goals that would make a difference to their work. Although SMART goals did not seep into the education lexicon until the 1990s, the power that they bring to school improvement work is the same. SMART goals can focus a school's or district's work and determine whether the work is making a difference.

Anne Conzemius, who has been working for more than 10 years with schools and districts to set SMART goals, said goals that schools set for themselves are more empowering for administrators and teachers than goals that are set for schools by external forces. "Mandates just don't carry the same life with them. When teachers engage with their grade-level colleagues or other teachers in their buildings to create meaningful goals, that makes a difference," said Conzemius, who with co-author Jan O'Neill wrote *The Power of SMART Goals* (Solution Tree, 2006). They are founders of Quality Leadership by Design, an educational consulting firm in Madison, Wis.

Develop Improvement Goals and Student Outcomes

TOOL 3.3, cont.

“One reason a lot of goals were never useful is because they didn’t saturate into the classroom. For goals to make a difference to teachers, teachers have to be engaged in the process of developing the goal so they own the goal. That means teachers have to look at the data and design a goal that makes sense to them. The goal becomes powerful when teachers use it to inform their practice,” she said.

Challenges of Setting Smart Goals

For a long time, Conzemius and O’Neill had to work to sell schools and districts on the idea that setting goals was an essential part of the improvement process. That’s no longer necessary, they said. Schools and districts get that part of the message.

The problem now is not that districts lack goals. “It’s that they want a goal for everything,” Conzemius said.

O’Neill agrees. “We walked into one district where there were literally hundreds of goals. One school might have several dozen goals. When you have that many goals, nothing is guiding your improvement work,” she said.

“In a lot of places, the strategic part gets lost but the true power of SMART goals is in that first criteria. It’s the strategic nature of SMART goals that results in breakthrough improvement. When goals are strategic, they’re focused on one or two academic breakthrough areas,” O’Neill said.

“It’s almost impossible to make significant improvement if you’re trying to focus on multiple goals,” O’Neill said. “You will be doing a lot of data gathering on key measures, studying new instructional strategies, assessing student progress, and evaluating where to go next. It’s hard to do all that and focus on more than one goal at a time. Plus, you’ll actually make greater progress on closing gaps in all areas if you focus on deeply improving just one area.”

The pair also have learned that goal setting needs to start at the top of the organization. That means that superintendents and their cabinets should be involved in the process. “If there is little coherence in the system overall, it’s almost impossible for a school to be successful because they need the support of curriculum, technology, and professional learning to achieve their goals. At the system level, the superintendent and others need to model and communicate the importance of strategic goals and priorities,” Conzemius said.

Once district goals are in place, schools can write goals to complement those district goals. Then grade-level or content-area teams can align their goals to support the school goals. The classroom teacher can write his or her SMART goals to blend with the grade-level or content-area goals. When that happens, Conzemius and O’Neill said systems start to make real progress.

Source: Adapted from “Work Smarter, Not Harder” by Joan Richardson, 2007, *Tools for Schools*, 11(2), p. 1. Copyright 2007 by NSDC. Adapted with permission.

Develop Improvement Goals and Student Outcomes

TOOL 3.3, cont.

What are SMART goals?

The acronym SMART comes from the five components of SMART goals.

- Strategic and Specific
- Measurable
- Attainable
- Results-based
- Time-bound

Patricia Roy (2007) describes SMART goals this way:

Strategic goals focus on high-priority issues that are part of a comprehensive school or district plan.

Specific goals focus on the precise needs of students for whom the goal is aimed.

For example, strategic goals are determined, in part, from analyzing student achievement and behavioral data. When this data is disaggregated, commonalities and differences among student groups become more apparent.

Measurable goals contain information about how a change will be calculated. The goal identifies the tool or instrument that will be used to measure whether the school or team has attained the desired results. Measurement is best accomplished by using a number of different tools and strategies. If a consistent pattern of change is seen through multiple measures, then the school will have greater confidence that its actions made the difference. For example, teams would use results from state assessment data, national standardized assessments, district or school performance measures, discipline referrals, or other instruments that measure performance, outcomes, or results.

Attainable goals include actions that the school can control or influence and that can be accomplished with existing resources. The team setting the goal identifies a baseline or starting point when determining whether a goal is attainable. The team also needs to know how much time and what other resources are available to accomplish the goal. There is a delicate balance between setting a goal that is compelling and energizing to staff while not becoming so unrealistic that educators are discouraged from accepting the goal because they believe it's not possible to reach.

Results-based goals identify specific outcomes that are measurable or observable. Results could be expressed as attaining a certain level of student achievement in a content area, an increase in the number of students who improve in a certain area, or as improved performance as defined and measured by a performance rubric or clear criteria.

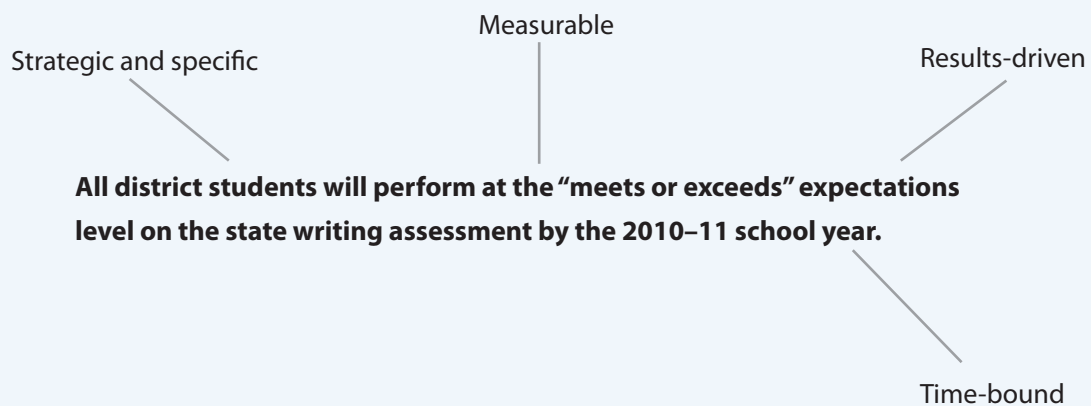
Develop Improvement Goals and Student Outcomes

TOOL 3.3, cont.

Many school people confuse “activity” with “results.” They place into their school improvement goals the “means” they will use to accomplish the goal, such as implementing a new mathematics program or using cooperative learning strategies, rather than describing the outcome they expect for students. Results-based means a clear and specific description of the results of the school’s activities.

Time-bound goals identify the amount of time required to accomplish it. Goals are sometimes more compelling when there is a sense of urgency attached to them. A pre-determined timeframe can create a sense of urgency and make the goal a priority to staff and students.

In short, SMART goals help us determine which of our efforts is making a difference, encourage us to set benchmarks to monitor progress, and identify specific evaluation measures.



Attainable: The school has three years to improve from 70% to 100%.

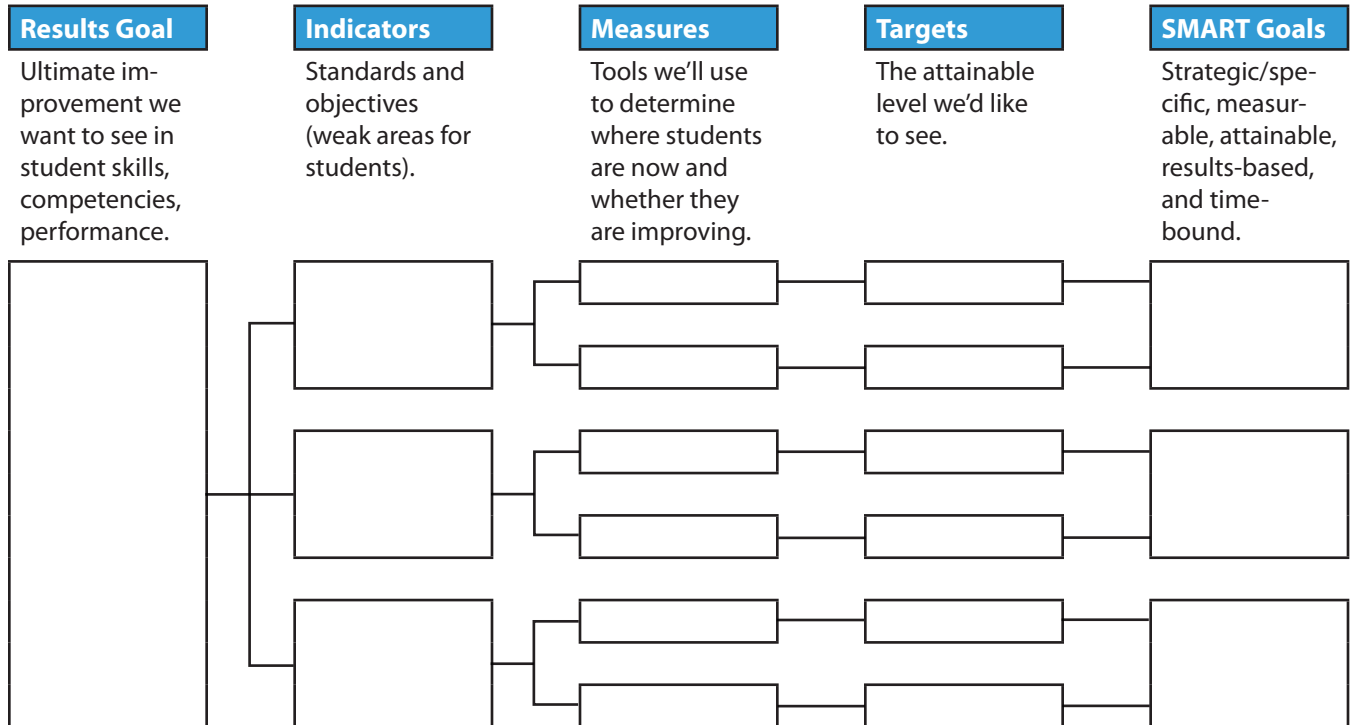
Reference: Conzemius, A., & O’Neill, J. (2002). *The handbook for SMART school teams*. Bloomington, IN: Solution Tree.

Source: Adapted from *A Tool Kit for Quality Professional Development in Arkansas* by P. Roy, 2007, pp. 79–81, Oxford, OH: NSDC. Copyright 2007 by NSDC. Adapted with permission.

Develop Improvement Goals and Student Outcomes

TOOL 3.3, cont.

Tree diagram

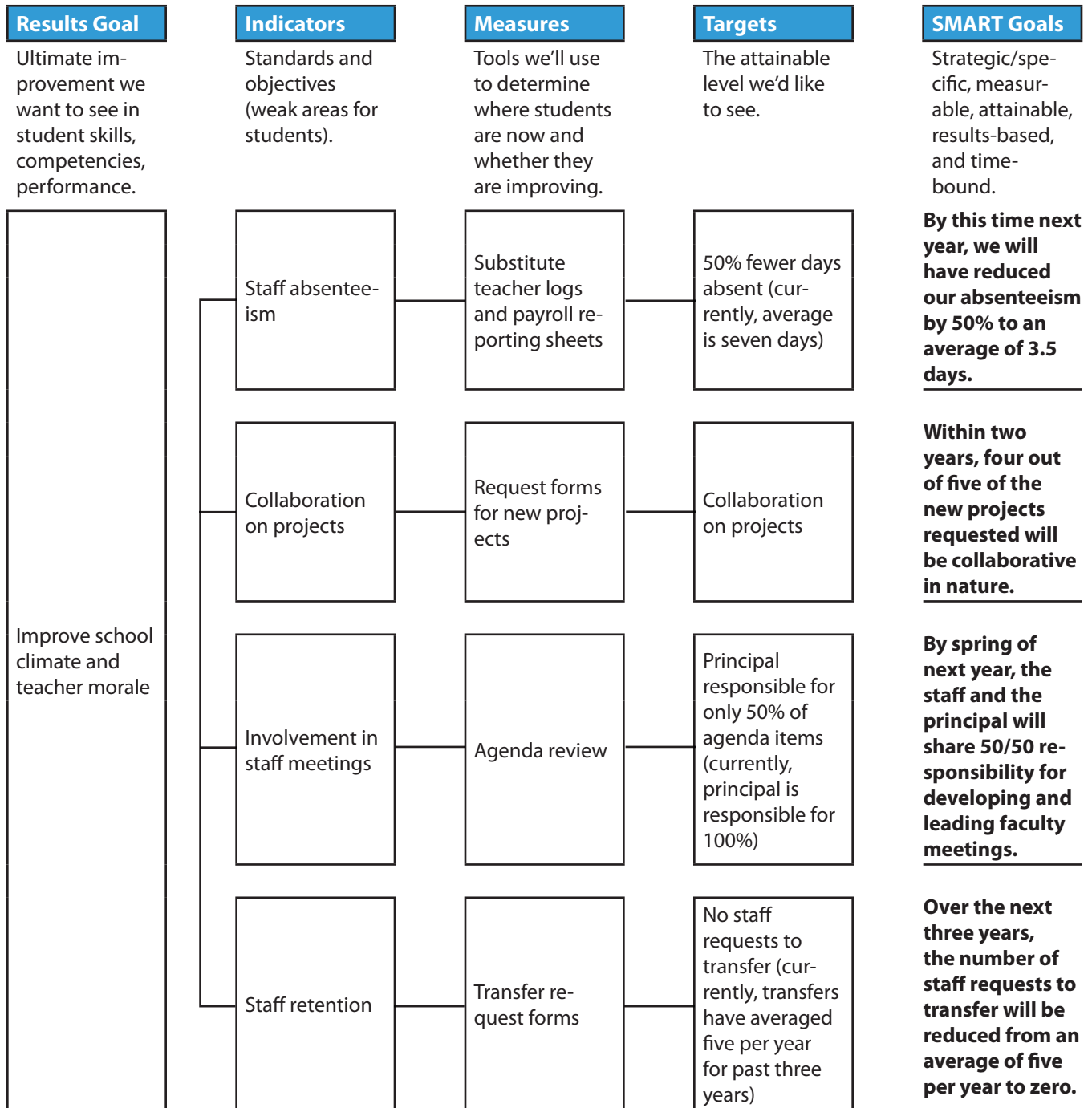


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Develop Improvement Goals and Student Outcomes

TOOL 3.3, cont.

Tree diagram for SMART climate goals

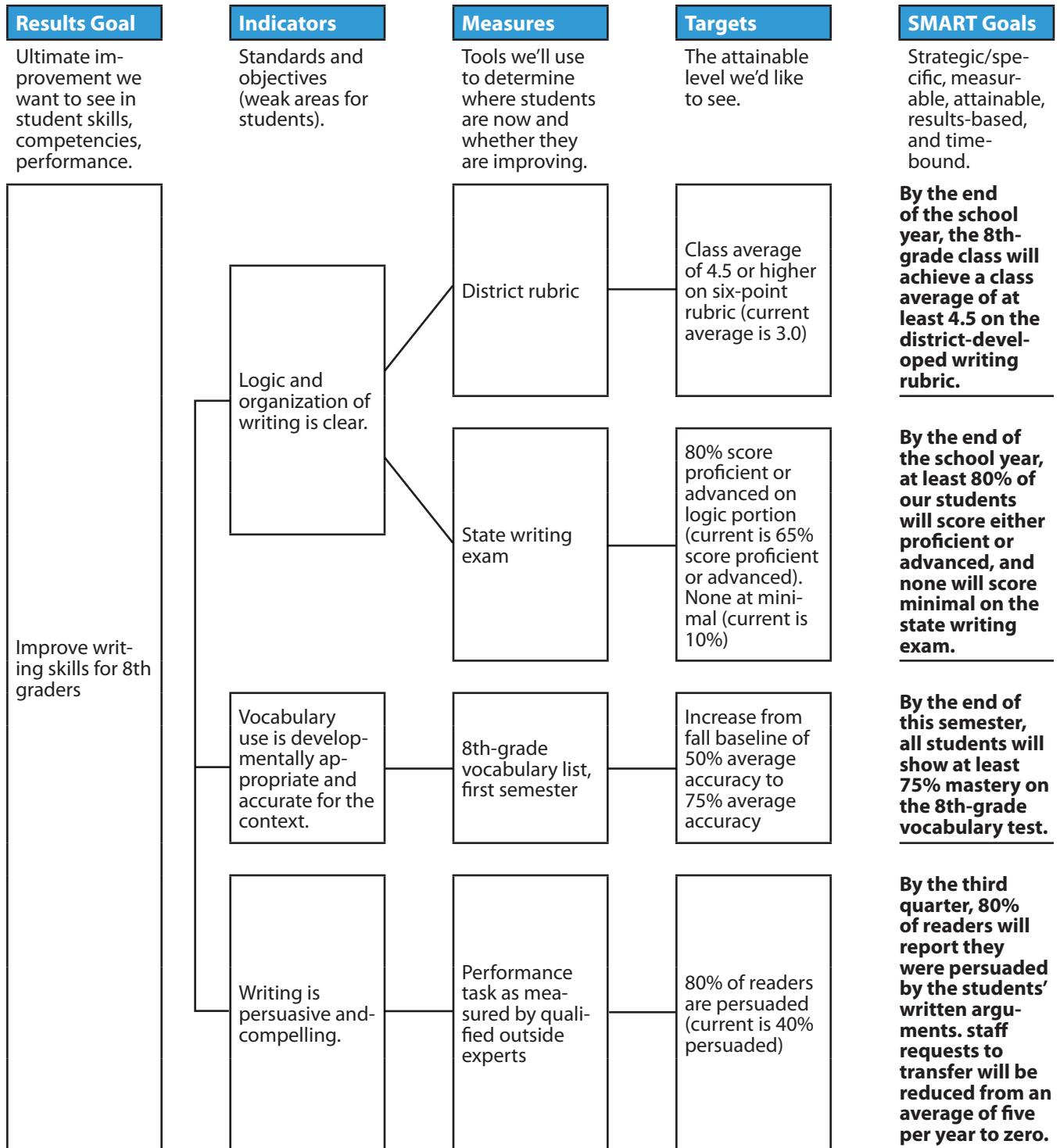


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Develop Improvement Goals and Student Outcomes

TOOL 3.3, cont.

Tree diagram for SMART writing goals for middle school students



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Develop Improvement Goals and Student Outcomes

TOOL 3.3, cont.

5 meetings for developing SMART goals

Meeting #1: Identify the need by isolating the opportunity or gap between the current situation and what is wanted.

- 5 min.** Ask the presenting question: What student learning issues are we struggling with the most?
- 10 min.** Brainstorm responses.
- 5 min.** Identify top three priorities by multivoting.
- 10 min.** Ask: What more do we need to know? How can we find out?

Between meetings, gather student data and information on priority areas.

Meeting #2: Identify SMART goals for priority areas.

- 10 min.** Present graphs of student performance in area of concern. (Focus on skill areas or proficiency/performance level.)
- 10 min.** Brainstorm results-oriented goal(s) for priority area(s).
- 5 min.** Select one results-oriented goal for each priority area(s).
- 10 min.** Make the results-oriented goal SMART. Individuals write indicators, measures, and targets for one goal.

Consider indicators by skill/competence/performance expectations aligned to standards. Consider both standardized and classroom-based measures. Consider student data when writing targets.
- 5 min.** Share SMART goals round robin one at a time.
- 15 min.** Have group select “best of” indicators, measures, and targets to write group SMART goal.
- 10 min.** Ask: What do we need to know to affect student learning for this SMART goal?

Between meetings, do literature research or best practice review.

Develop Improvement Goals and Student Outcomes

TOOL 3.3, cont.

Meeting #3: Correlate best practices to current practices.

- 10 min.** Share information gathered between meetings.
- 10 min.** Develop matrix. What are we already doing that supports best practice in this area? What else would we like to learn about?
- 10 min.** Identify instructional strategies we want to do, do more often, or stop doing.

Between meetings, research ways to develop professional knowledge to learn best practices.

Meeting #4: Identify professional learning methods we want to use.

- 10 min.** Share information about various professional learning methods.
- 10 min.** Use matrix. Individuals select preferred strategy for learning about best practices, identifying areas in which they are willing to coach/teach others.
- 15 min.** Discuss implementation. How will we implement professional learning for best practices? What support do we need? How will we measure progress on the SMART goal?

Between meetings, implement professional learning and integration of best practices. Gather data to measure against the baseline.

Meeting #5: Analyze results and refocus efforts.

- 10 min.** Present graphs of new data.
- 15 min.** Discuss what worked, what did not work, and why.
- 15 min.** If the instructional strategy worked well, discuss how to hold the gains. If the strategy did not work well, decide next steps: Start doing the strategy differently, stop doing the strategy altogether, or start a new strategy.

Start the cycle over again.

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Identify Educator Needs and Goals

TOOL 4.1 Back to Identifying Educator Needs and Goals Tools Chart

Sample educator learning goals

Use this tool as a model of how student learning goals influence educator learning objectives.

Purpose	Provide an example of how educator learning goals emerge from student learning goals.
Non-purpose	Serve as the single best example of educator learning outcomes.
The following example demonstrates how a student learning goal leads to educator learning objectives:	
Goal	Improve student achievement in rational numbers by 15% on annual mathematics assessments through professional learning focused on increasing teachers' content knowledge and content-specific pedagogy.
Type of Change	Example
Knowledge	Understands rational numbers and content-specific vocabulary.
Attitudes	Believes that developing students' understanding of rational numbers contributes to their success in higher-level math, high school graduation, and college and career readiness.
Skill	Uses higher-order thinking skills to elicit students' understanding of rational numbers and thinking during problem solving.
Aspiration	Desires to teach all students to succeed in higher-level math.
Behavior	Applies effective questioning skills in math instruction to elicit student thinking during problem solving.

Identify Educator Needs and Goals

TOOL 4.1, cont.

Educator Learning Objectives

- Increase teachers’ content knowledge and precision in content vocabulary related to rational numbers as evident in lesson plans and instructional materials. **KNOWLEDGE**
- Increase teachers’ accuracy and frequency of use of questioning strategies in math instruction by at least two levels as described in the IC maps. **SKILLS, ATTITUDES, ASPIRATIONS, and BEHAVIOR**

Student Learning Objectives

- Increase students’ ability to explain their thinking as they solve rational number problems by two levels as described on the IC maps. **KNOWLEDGE and SKILLS**
- Increase students’ achievement on benchmark assessments on rational number problems. **KNOWLEDGE and SKILLS**

Achievement of educator and student learning outcomes over time

Short-term outcomes	Medium-term outcomes	Long-term outcomes
Knowledge Skills	Attitudes Aspirations Behaviors	Intended results
Teachers gain knowledge and skills.	Teachers gain aspirations, attitudes, and behaviors.	Students gain aspirations, attitudes, behaviors, knowledge, skills.
Increase teachers’ content knowledge and content-specific pedagogy.	Change teachers’ instructional practices.	Increase student achievement.

Study Research and Evidence for Guidance About Professional Learning

TOOL 5.1 Back to Studying Research and Evidence for Guidance About Professional Learning Tools Chart

Professional learning program review

Program title: _____

Content area(s): _____

Grade(s): _____

Program Goals				
Evidence of success	Yes	No	Instrument/Measure	Notes
Student achievement				
Sub-group student achievement				
Student behaviors				
Student attitudes				
Teacher content knowledge				
Teacher practices				
Teacher attitudes				

Program Content	Notes
Content	
Pedagogy	
Both	
Other (student behaviors, classroom management)	

Study Research and Evidence for Guidance About Professional Learning

TOOL 5.1, cont.

Professional Learning Processes					
Professional learning designs	Face-to-face	Distance/Online	Blended format	Length	Notes
Action research					
Case studies					
Critical friends groups					
Examining student work					
Lesson study					
Monitoring/Coaching					
Peer observation					
Protocols					
Study group					
Training					
Tuning protocol					

Follow-Up	Yes	No	Notes
Classroom-based			
Non-classroom-based			

Program Context			
Demographics	Yes	No	Notes
Rural			
Urban			
Suburban			

Students/School Demographics	Notes
Ethnic/Racial	
Socioeconomic status	
Size of school and district	
Teaching staff characteristics	

Study Research and Evidence for Guidance About Professional Learning

TOOL 5.1, cont.

Support Needed	Notes
Community	
District	
School	
Team	

Other Features

Intended Participants	Yes	No	Notes
Individual teachers			
Teams			
Grade level			
Department			
Vertical team			
School			
District			
Leadership			

Cost	Yes	No	Notes
Registration fee			
Consultant honorarium			
Travel costs (airfare, lodging, meals)			
Teacher materials			
Software			
Student materials			
Classroom materials			

Source: *What Works in the Middle: Results-Based Staff Development* by Joellen Killion, 1999, Oxford, OH: NSDC and NEA. Copyright 1999 by NSDC.

Study Research and Evidence for Guidance About Professional Learning

TOOL 5.2 Back to Studying Research and Evidence for Guidance About Professional Learning Tools Chart

Process: Selecting the design that works with the context and content

Purpose	Use the questions below to guide the selection of learning designs to achieve the intended outcomes of professional learning
Non-Purpose	Identify the single best learning design
Questions to consider about connecting the purposes of professional learning with specific learning designs	<ol style="list-style-type: none"> 1. Which designs are most useful for gathering and using information from within the school or district about learning? 2. Which designs are most likely to use outside resources to inform the work? 3. Which designs are especially useful in creating a learning community? 4. Which designs focus most on standards, curriculum, and assessment? 5. Which designs focus most on practice or pedagogy? 6. Which designs are most useful for looking at classrooms? 7. Which designs focus on the whole school and/ or beyond? 8. Which designs are particularly reflective? 9. Which designs look at student work or involve students in some way? 10. Which designs are best for bringing others (other than teachers or administrators) into the school improvement effort? 11. Which designs can be used to address specific problems and seek solutions? 12. Which designs result in a concrete product? 13. Which designs are the most experiential? 14. Which designs involve modeling?

Study Research and Evidence for Guidance About Professional Learning

TOOL 5.2, cont.

<p>Questions to consider about how learning designs are implemented</p>	<ol style="list-style-type: none"> 1. Does the design connect with other designs? 2. Does the design accommodate individual learners, learners in small, concurrent groups, or learners in one large group? 3. Does the design require a facilitator? 4. Which designs require administrators to be involved? 5. Which designs work best when school is in session? 6. Which designs cost the most?
--	---

Study Research and Evidence for Guidance About Professional Learning

TOOL 5.2, cont.

Powerful Design	Who should be involved?				Individuals or groups?		
	Classroom teachers	Administrators	University or college staff	Community, parents, policy makers, students	Individuals at first, then groups	Pairs	Large groups/ concurrent small groups
Accessing Student Voices	X	X		X	X		
Action Research	X	X	X				X
Assessment as Professional Learning	X	X	X				X
Case Discussions	X	X					X
Classroom Walk-throughs	X	X			X	X	
Critical Friends Groups	X						X
Curriculum Design	X	X	X				X
Data Analysis	X	X	X	X			X
Dialogue	X	X					X
Differentiated Coaching	X				X		
Immersing Teachers in Practice	X	X					X
Journaling	X	X			X		
Lesson Study	X		X				X
Mentoring	X	X				X	X
Portfolios for Educators	X	X			X		
School Coaching	X	X	X	X			X
Shadowing	X	X		X	X		
Standards in Practice	X	X	X	X			X
Study Groups	X	X	X	X			X
Training the Trainer	X		X		X		
Tuning Protocols	X	X	X				X
Video	X	X					X
Visual Dialogue	X	X					X

Study Research and Evidence for Guidance About Professional Learning

TOOL 5.2, cont.

Powerful Design	When? (Assumes no less than 1-year commitment)						
	Frequently				Duration		
	3–6 times a year	At least monthly	At least weekly	Daily	Each session is 3 hours or more	Each session is 1 to 2 hours	Each session is an hour or less
Accessing Student Voices	X				X		
Action Research		X					X
Assessment as Professional Learning	X ¹				X		
Case Discussions		X				X	
Classroom Walk-throughs			X				X
Critical Friends Groups		X			X ²	X ³	
Curriculum Design	X ⁴				X		
Data Analysis	X				X		
Dialogue	X					X	
Differentiated Coaching		X				X	
Immersing Teachers in Practice		X				X	
Journaling				X			X
Lesson Study	X ⁵					X	
Mentoring			X				X
Portfolios for Educators			X				X
School Coaching		X				X	
Shadowing	X				X		
Standards in Practice			X				X
Study Groups	X				X		
Training the Trainer	X				X		
Tuning Protocols		X				X	
Video		X					X
Visual Dialogue	X				X		

- 1 Likely to be multi-year.
- 2 Two to three hours.
- 3 Two to three hours.
- 4 Likely to be multi-year.
- 5 Usually two cycles per year, each cycle 10 hours long, weekly sessions.

Study Research and Evidence for Guidance About Professional Learning

TOOL 5.2, cont.

Powerful Design	What and Why?						
	Useful for gathering data in a school	Involves gathering information from external sources	Particularly helpful in creating a learning community	Looks at standards, curriculum, assessment	Focuses on pedagogy and teaching	Involves looking at classrooms	Involves looking at whole school/ beyond
Accessing Student Voices	X						X
Action Research	X	X	X		X	X	
Assessment as Professional Learning			X	X			
Case Discussions		X		X	X		
Classroom Walk-throughs	X		X	X	X	X	
Critical Friends Groups		X	X	X	X	X	
Curriculum Design		X		X			X
Data Analysis	X						X
Dialogue			X	X	X		X
Differentiated Coaching		X			X		
Immersing Teachers in Practice				X	X		X
Journaling					X		
Lesson Study	X	X	X	X	X	X	
Mentoring			X		X	X	
Portfolios for Educators	X				X	X	
School Coaching		X					X
Shadowing	X	X				X	
Standards in Practice	X		X	X	X		X
Study Groups		X	X	X			X
Training the Trainer		X		X	X		
Tuning Protocols			X		X	X	
Video	X		X	X	X	X	X
Visual Dialogue	X	X	X	X			X

Study Research and Evidence for Guidance About Professional Learning

TOOL 5.2, cont.

Powerful Design	How?										
	Connect with other designs?		Individuals or groups?			Facilitator needed?			Administrator involvement?		
	Yes	No	Individuals first, then groups	Pairs	Large groups/ Concurrent small groups	No	At first	Yes	Support	Participation	
										Essential	Essential
Accessing Student Voices	X		X					X	X		X
Action Research	X			X	X			X	X		
Assessment as Professional Learning	X			X	X			X		X	
Case Discussions	X			X	X			X	X		X
Classroom Walk-throughs	X		X			X				X	
Critical Friends Groups	X			X	X		X		X		
Curriculum Design	X			X	X			X		X	
Data Analysis	X			X	X			X	X	X	
Dialogue	X			X	X		X		X		X
Differentiated Coaching		X	X			X			X		
Immersing Teachers in Practice	X			X	X			X	X		X
Journaling	X		X			X			X	X	
Lesson Study	X				X	X			X		
Mentoring	X				X		X		X		X
Portfolios for Educators	X		X			X			X	X	
School Coaching	X				X			X	X	X	
Shadowing	X		X					X	X	X	
Standards in Practice	X				X		X			X	
Study Groups	X				X		X		X	X	
Training the Trainer		X	X			X			X		
Tuning Protocols	X				X		X		X		X
Video	X				X			X		X	
Visual Dialogue	X				X			X	X	X	

Source: Adapted from *Powerful Designs for Professional Learning, 2nd Edition* (pp. 27–37) by L. B. Easton, 2008, Oxford, OH: NSDC. Copyright 2008 NSDC. Adapted with permission.

Plan Professional Learning Implementation and Evaluation

TOOL 6.1 Back to Planning Professional Learning Implementation and Evaluation Tools Chart

Peer observation practices and implications

Use this tool to record ideas gained during a visit to a colleague’s classroom and to consider the implications of those ideas for your own teaching practice.

Purpose	Record ideas gained during a visit to a colleague’s classroom. Consider how the ideas might be useful in your own classroom.
Non-purpose	Judge your colleague’s performance. Identify ineffective teaching strategies.
Time	Time of classroom visit and approximately 20–30 minutes for reflection
<p>Record the behaviors you observed during your visit to your colleague’s class. After the class, consider the implications for your classroom.</p> <ul style="list-style-type: none"> • Which practices might be useful in your classroom? • What impact might they have on your teaching and students’ learning? • What would you need to do to implement the practices? • What questions do you have for your colleague before you implement the strategies? • Which strategies would not work and why? 	

Date of visit: _____

Class description: _____

Observations	Implications for your practice

Plan Professional Learning Implementation and Evaluation

TOOL 6.2 Back to Planning Professional Learning Implementation and Evaluation Tools Chart

Start-continue-stop doing template

Use this worksheet to reflect on what you observed during your visit to other colleagues' classrooms or schools and how it will affect your decisions to introduce, continue, and discontinue practices in your own classroom.

Purpose	Identify what you will start, continue, and stop doing as a result of visiting a colleague's classroom. Share with a colleague how the visit helped you determine what to start, continue, and stop doing.
Non-purpose	Judge a peer's performance. Provide feedback to colleague about his or her teaching.
Time	Time of visit plus 20–30 minutes for reflection.
Based on your visit, what practices are you considering implementing in your own classroom? How do you anticipate that those practices will contribute to your effectiveness and student learning?	
Based on your visit, what practices will you continue using in your classroom?	
Based on your visit, what practices will you consider stopping in your classroom? How did the visit help you recognize the need to stop these practices? What do you anticipate will be the impact of stopping them?	

Plan Professional Learning Implementation and Evaluation

TOOL 6.3 Back to Planning Professional Learning Implementation and Evaluation Tools Chart

8 smooth steps: Solid footwork makes evaluation of professional learning programs a song

Ready, on the downbeat

Planning Phase

1. **Assess evaluability.** Determine whether the professional learning program is ready to be evaluated.
2. **Formulate evaluation questions.** Design formative and summative evaluation questions.
3. **Construct evaluation framework.** Determine the evidence needed to answer the evaluation questions, the data sources, the data collection methodology, logistics of data collection, and the data analysis methods.

Conducting Phase

4. **Collect data.** Manage data collection process and collected data.
5. **Organize and analyze data.** Organize, analyze, and display data.
6. **Interpret data.** Interpret data to determine merit, worth, and/or impact and to make recommendations for improvement.

Reporting Phase

7. **Disseminate findings.** Identify audiences to receive findings, the most appropriate format for communicating findings to each, and disseminate findings.
8. **Evaluate the evaluation.** Reflect on the evaluation process, the knowledge and skills of the evaluation team, the resources and methodologies used, and the findings to improve future evaluations.

Source: *Assessing Impact: Evaluating Staff Development* by Joellen Killion, 2002, Oxford, OH: NSDC. Copyright 2002 by NSDC.

Evaluating the effectiveness of professional learning and demonstrating its impact on student achievement are more important than ever. The language in professional learning policies requires districts to show evidence of professional learning's ability to improve student learning.

Learning Forward, some states' legislation, and the federal No Child Left Behind Act all call for rigorous evaluation of professional learning programs. With more emphasis on accountability, professional learning developers will want to explore ways to evaluate their programs and to link professional learning to student learning. An evaluation also will help providers and leaders improve their programs.

"Evaluation is a systemic, purposeful process of studying, reviewing, and analyzing data gathered from multiple sources in order to make informed decisions about a program" (Killion, 2002, p. 42). A good evaluation of a professional learning program can be accomplished by following eight steps. This eight-step process is drawn from extensive practice and research in program evaluation.

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

STEP 1: Assess Evaluability

The first step is determining the degree to which a program, as planned, is ready to be evaluated. Sometimes professional learning leaders and providers want to link an episode of professional learning, such as a workshop or single professional learning day, to student learning. This is nearly impossible because the workshop or professional learning day alone is insufficient to produce results for students or teachers. Evaluations of partial or insufficient professional learning programs likely will yield disappointing results.

Most professional learning programs are inadequate to produce the results they seek. Killion (2002) writes:

We cannot expect results for students from a professional learning program that is unlikely to produce them. And we cannot expect an evaluation to produce useful results when the program being evaluated is poorly conceived and constructed. Perhaps Chen (1990) said it best: “Current problems and limitations of program evaluation lie more with a lack of adequate conceptual framework of the program than with methodological weakness” (as cited in Killion, 2002, p.49).

Before evaluating any professional learning program, the evaluator asks whether the program is feasible, clear, sufficiently powerful to produce the intended results, and worth doing. To determine whether a program is ready to be evaluated, an evaluator analyzes the program’s goals, its standard of success, indicators of success, theory of change, and logic model.

Goals

A professional learning program’s goals express its intended results in terms of student achievement. Instead of “provide training to all teachers” as its goal, a results-driven program has as a goal improving student achievement. A sample goal might be to improve student achievement in mathematics by 2005 by 10% as measured on the state assessment. When the goals are expressed in terms of student achievement, the program’s design is more likely to include sufficient actions to achieve them.

Standard of Success

A program’s standard of success is the benchmark that defines its success. It typically is a number representing the performance increase that, when met, is sufficient to declare the program a success. If the goal does not specify a particular degree of improvement, then any degree of improvement, even 0.002, may indicate success. Most professional learning leaders want a specific increase in student performance as a return on their investment. For example, in the goal above, the standard of success is 10%. If the professional learning program increases student achievement by 10% in mathematics, it is declared a success. If not, it falls short of its intended results and may be altered to increase effectiveness in subsequent years.

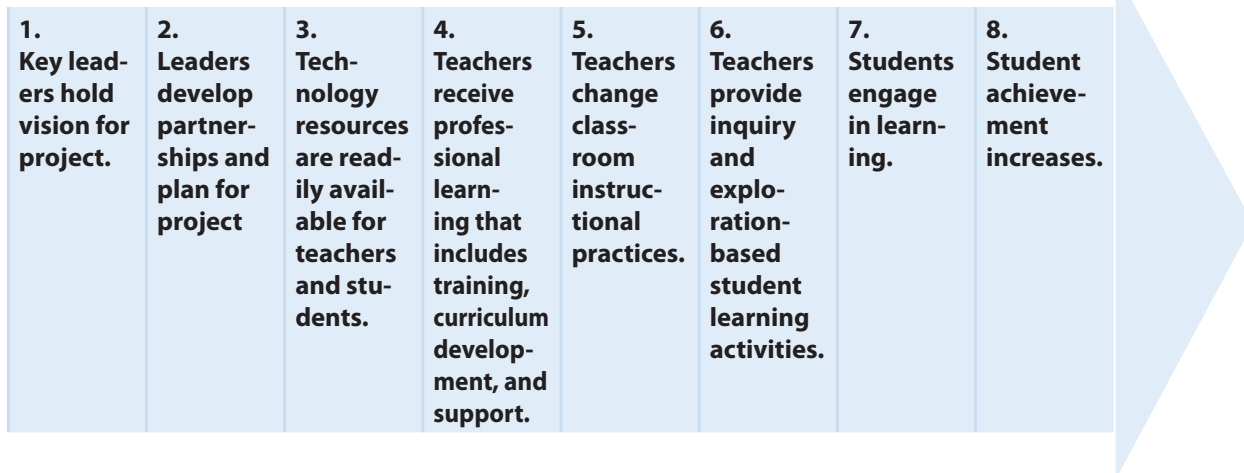
Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

Indicator of Success

An indicator of success is the specific way success will be demonstrated. It is the way an evaluator will know if the standard of success has been achieved. In the example above of a 10% increase in math test scores, the indicator of success is student performance on the state assessment in mathematics. Certainly other indicators might be used to demonstrate students' increased achievement in math: performance on other assessments, classroom tasks, enrollment of underrepresented populations in advanced level courses, grades, performance on a national standardized test, or a combination of these. Program designers might specify single or multiple indicators of success. Program designers must identify both a standard of success and indicator of success early when planning a professional learning program so the program's design can be tailored to achieve the desired results.

Theory of Change for Technology Integration: A Sample



This theory of change is based on the following assumptions:

- Thorough planning contributes to program's success.
- Integrating technology advances student learning.
- To change instructional practice, teachers require opportunities to gain new knowledge and skills and appropriate resources.
- Implementing new teaching practices improves student achievement.
- When students are engaged in learning, they achieve.

Theory of Change

A theory of change requires program designers to think carefully about how their program will bring about the changes they want. A theory of change (see diagram below) specifies how change is expected to happen, the program's components, their sequence, and the assumptions upon which the program is based (Killion, 2002). An explicit theory of change is a roadmap for program designers, managers, participants, stakeholders, and evaluators showing how the program will work. It is the big picture that serves as a planning tool, an implementation guide, a monitoring tool, and a tool for evaluating the program's success. It allows the program designers to explain how they see the connection between educator learning and

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

student achievement. Without the theory of change, the connection between the program's components and its results may be unclear.

Any one program can have multiple theories of change. Individual theories are neither right nor wrong, but one may be more appropriate for a specific context and circumstances. Theories can be based on other theories, research, or best practice. For example, the social interaction theory of learning might serve as the basis for designing how adult learning happens in a professional learning program. Based on this theory, participants would have multiple, frequent, in-depth opportunities to process their learning with colleagues.

Logic Model

A logic model is a particular kind of action plan that specifies the inputs, activities, initial, intermediate, and intended outcomes that will accomplish the identified goal. Thorough planning increases a program's potential to succeed. Planning ensures that all the program's activities align with the intended outcomes and that initial and intermediate outcomes will lead to the intended results. A logic model provides a framework for conducting the formative program evaluation as well as for the program design. (See sample logic model below.) The logic model identifies the benchmarks of progress toward a goal. The short-term outcomes lead to medium-term outcomes that lead to long-term outcomes. With this map of the outcomes in place, evaluators are able to determine which outcomes are important to collect evidence about in order to explain the link between professional learning and student achievement (Killion, 2002).

A logic model has the following components:

- **Inputs:** Resources assigned to a program including personnel, facilities, equipment, budget, etc.
- **Activities:** Services the program provides to clients.
- **Initial outcomes:** Changes in clients' knowledge and skill as a result of early activities.
- **Intermediate outcomes:** Changes in clients' attitudes, aspirations, and behavior as a result of the knowledge and skills acquired.
- **Intended results:** Desired results of the program expressed as increases in student achievement.

Building on the program's theory of change, which identifies the program's key components, the logic model specifies what will change as a result of each program component. Professional learning is most successful in increasing student achievement when it targets changes in knowledge, attitudes, skill, aspirations, and behavior (see "Spelling out KASAB" above right). For example, if one component of a professional learning program is providing coaching to classroom teachers, the initial outcome of this might be that teachers become more motivated to implement the strategies in their classroom (teachers' aspirations change). An intermediate outcome might

Spelling out KASAB

Knowledge: Conceptual understanding of information, theories, principles, and research.

Attitudes: Beliefs about the value of particular information or strategies.

Skill: Strategies and processes to apply knowledge.

Aspirations: Desires, or internal motivation, to engage in a particular practice.

Behavior: Consistent application of knowledge and skills.

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

be that teachers use the new strategies regularly (a teacher behavior change). The intended outcome is that student achievement increases (student knowledge, skill, and behavior change) as a result of teachers regularly implementing new instructional strategies in their classrooms.

Logic model for professional learning on technology integration: a sample

Inputs	Activities →	Initial outcomes →	Intermediate outcomes →	Intended results
<ul style="list-style-type: none"> • Technology hardware, software, and infrastructure • Trainers • Planning time for integrating technology into mathematics lessons • Time for conferring with coaches 	Teachers and principals receive training on technology integration in mathematics.	Teachers and principals develop an understanding of how technology can enhance students' mathematics learning, engage students more actively in learning, differentiate learning and assessment. Knowledge	Teachers integrate technology into their mathematics instruction. Behavior and aspiration	Student achievement in mathematics increases by 10% by the year 2005.
	Technology resources are deployed in mathematics classrooms.	Teachers learn strategies for integrating technology into mathematics instruction. Skill	Teachers integrate technology into their classroom instruction on a regular basis.	
	Teachers are coached on integrating technology into their mathematics curriculum.	Teachers' comfort with integrating technology increases and they design opportunities for students to use technology for learning. Attitudes and behavior	Students use technology to gather information, construct understanding, demonstrate understanding, and engage more actively in learning. Behavior and aspiration	
	Principals are trained in how to support teachers as they integrate technology into their classrooms and how to serve as a leader for technology in their schools.	In instructional conferences, principals provide support to teachers in integrating technology into their classrooms. Behavior	Teachers' attitudes about technology improve. Attitudes Students' attitudes about technology improve. Attitudes	

Knowing the precursors to the goal, program developers can monitor for evidence that the precursors are affecting student and teacher learning and adjust the program design to ensure that the precursors occur. Without monitoring, one cannot expect the intended results.

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

For the evaluator, the precursors, or initial and intermediate outcomes, typically provide benchmarks for collecting evidence in the formative evaluation. To form a reasonable and supportable claim about the link between professional learning and student achievement, the evaluator must know whether teachers received coaching, whether that coaching motivated them to implement the strategies, and whether teachers implemented the strategies.

When developing a theory of change and the logic model, program designers specify the types of changes they want to occur. By clearly delineating these changes, designers will be able to design the appropriate actions to accomplish them. Often professional learning program planners want teachers to change their behavior, for example, but plan actions that will change only teachers' knowledge and skills.

STEP 2: Formulate Evaluation Questions

The questions an evaluation attempts to answer shape the evaluation's design. For example, if a formative evaluation asks whether teachers are integrating new technologies in their classrooms, the evaluation questions might be:

- How frequently are teachers using technology in their mathematics lessons?
- How well are teachers integrating technology into their mathematics instruction?
- How frequently do students use technology to demonstrate their understanding of mathematics?
- For what learning tasks do teachers use technology?
- In what other content areas are teachers integrating technology?
- How do students use technology to learn?

The theory of change and the logic model are used to generate formative evaluation questions. Questions can be formulated from each initial and intermediate outcome in the logic model, from each step of the theory of change, from both, or from steps in either that are pivotal to the program's success. For example, for the theory of change and logic model above, an evaluator may choose not to measure whether teachers and principals learned about the value of technology, but rather to measure whether teachers are integrating technology in their classrooms and whether principals are providing the appropriate level of support to their teachers. An evaluator may assume that, if a teacher is using technology appropriately, teachers know how technology contributes to student learning.

Summative evaluation questions ask whether the program achieved its goals. If the goals are written as student achievement goals, then the evaluation is able to yield evidence about the impact of professional learning on student achievement. If the goals are not expressed as student achievement goals, then the evaluation will allow claims about merit—the degree to which the program achieved its results—but not its impact on student achievement. The summative evaluation question for the goal expressed earlier is: Does student achievement in mathematics increase by 10% by 2005 as a result of integrating technology into the classroom.

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

Evaluators craft questions that allow them to know whether the goal is achieved. To know whether technology integration influenced students' achievement in mathematics, evaluators first examine the theory of change and logic model to understand how teacher learning influences student achievement and then design formative and summative evaluation questions that allow them to gather the appropriate evidence to make a claim that teacher learning contributes to student learning. Without first answering the formative questions, evaluators will be unable to claim that teachers' learning contributes to student learning in mathematics.

STEP 3: Construct Evaluation Framework

The evaluation framework is the plan for the evaluation. Decisions made in this step determine the evidence needed to answer the formative and summative evaluation questions, decide the appropriate sources of that evidence, determine appropriate and feasible data collection methods, the timeline for data collection, person(s) responsible for the data collection, and data analysis method. Knowing what change is expected helps the evaluator determine the best source of evidence and the most appropriate data collection method.

For example, if the evaluator wants to know whether teachers are using technology, teachers themselves are the best source of that information. To triangulate, the evaluator may want to include students, principals, and documents as other data sources to confirm the accuracy of teachers' judgments. Classroom observations of teachers integrating technology may be the most authentic data collection method for knowing whether teachers are using technology; however, evaluators may select alternative data collection methods that will be less timeconsuming or costly. Approximate indicators of teachers' use of technology might include assignments, student work samples, student surveys about technology use, principals' observations, and system administrators' records about student time using particular software programs.

STEP 4: Collect Data

The evaluator next prepares for and collects the data. Evaluators will want to pilot newly developed or modified data collection instruments to ensure the instruments' accuracy and clarity. Data collectors may require training to ensure consistency and data reliability if more than one individual is collecting data. Data collection processes must be refined for accuracy, and appropriate protocols for collecting data must be developed that give detailed explanations for how to collect data. Once these responsibilities are met, data are collected. This is relatively routine work for most evaluators, although this step holds the potential for compromising the quality of the evaluation if data are not accurately collected and recorded.

When collecting data, evaluators adhere to standards established by the American Evaluation Association (1995) and the Joint Committee on Standards for Educational Evaluation (1994) on working with human subjects, if applicable. They ensure that they have met all the policy expectations of schools and districts for notification, privacy of records, or other areas, and abide by a code of ethics for evaluators.

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

Data collection requires a systematic and thoughtful process to ensure that data collected are accurate and have been collected as planned. To ensure accuracy in this step, evaluators often create checks and balances for themselves to ensure that data are recorded accurately, that errors in data entry are found and corrected, and that missing data or outlier data are handled appropriately. Evaluators who attend to details well and who are methodical in their work collect data well.

STEP 5: Organize and Analyze Data

Evaluators must organize and analyze data collected. Evaluators ensure the data's accuracy by checking for any abnormalities in the data set and checking that data are recorded appropriately and records are complete. Once evaluators are confident that the data have integrity, they analyze the data. Many practitioners distrust their own ability to do a statistical analysis. But in most cases, simple analyses such as counting totals, finding patterns and trends, or simple calculations such as determining the mean, median, mode, and range are sufficient. Sometimes it may be appropriate to use more sophisticated comparisons that include factoring, assessing covariance, or creating statistical models. When evaluators want this level of analysis, they might want to get help from someone experienced in inferential statistics.

Once data are analyzed, they are displayed in charts, tables, graphs, or other appropriate formats to allow people with different preferences to find the format that works best for them. Careful titling and labeling helps ensure that readers interpret the data accurately.

STEP 6: Interpret Data

While data analysis is the process of counting and comparing, interpreting is making sense of what the analysis tells us. "Interpretation is the 'meaning-making' process that comes after the data have been counted, sorted, analyzed, and displayed" (Killion, 2002, p. 109). For example, we can tell that the scores went up if we compare scores over three years (analysis). In the interpretation phase, we ask what that means in terms of our work—what contributed to the increase, what does the increase mean, was the increase consistent across all grades, etc.?

Evaluators seek multiple interpretations and talk with stakeholders about which interpretations are most feasible from their perspective. The evaluators then determine which interpretations are most supported by the analyzed data (Killion, 2002). Interpreting data is best done as a collaborative process with program designers and key stakeholders, including participants. In most evaluations of professional learning programs, this means that teachers, principals, and central office staff together study the data and form claims about the program's effectiveness and impact on student learning, and then recommend improvements.

Evaluators form claims about a program's merit, the degree to which it achieved its goals, its worth, participants' perception of the program's value, and the program's contribution to student learning. Claims of contribution, those stating that the program influenced student achievement, are made when the

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

evaluation design is descriptive or quasi-experimental. Claims of attribution, that professional learning and nothing else caused the results, require experimental, randomized design not often used in evaluation studies.

STEP 7: Disseminate Findings

After they interpret data, evaluators share their findings. Evaluators must decide what audiences will receive results and the most appropriate formats in which to share those results since different audiences require different formats. Formats for sharing evaluation results include technical reports, brief executive summaries, pamphlets, newsletters, news releases to local media, and oral presentations. Evaluations sometimes fail to have an impact on future programs because results are not widely shared with key stakeholders.

STEP 8: Evaluate the Evaluation

Evaluations rarely include this step. Evaluating the evaluation involves reflecting on the evaluation process to assess the evaluator's work, the resources expended for evaluation, and the overall effectiveness of the evaluation process. Evaluating the process is an opportunity to improve future evaluations and strengthen evaluators' knowledge and skills. "When evaluators seek to improve their work, increase the use of evaluation within an organization, and build the capacity of others to engage in 'evaluation think,' they contribute to a greater purpose. Through their work, they convey the importance of evaluation as a process for improvement and ultimately for increasing the focus on results" (Killion, 2002, p. 124).

Conclusion

Evaluating professional learning requires applying a scientific, systematic process to ensure reliable, valid results. Evaluation not only provides information to determine whether programs are effective, it provides information about how to strengthen a program to increase its effectiveness. With more limited resources available today for professional learning, state, district, and school leaders will face harder decisions about how to use those resources. Evaluations can provide the evidence needed to make these critical decisions.

Adapted from "8 Smooth Steps: Solid Footwork Makes Evaluation of Staff Development Programs a Song" by J. Killion (2003), *JSD*, 24(4). Copyright 2003 by NSDC. Adapted with permission.

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

Keep the whole process in mind (Steps 1–8)

Steps to Your Own Evaluation

By Joellen Killion

These tools are structured to help evaluation practitioners apply an eight-step process for planning, conducting, and reporting their impact evaluations. The tools will assist evaluators in making essential decisions for impact evaluations of professional learning programs. We invite you to use these tools to begin your own evaluations.

Start by Asking:

- What is the purpose of this evaluation?
- Who are the primary users of the evaluation results?
- What is their intended plan for using the results?

STEP 1: Assess Evaluability

1. What are the program's goals? Are they plausible, student-focused, and results-oriented?
2. What are the program's objectives?
 - Are they measurable?
 - Do they specify the intended change (knowledge, attitudes, skill, aspirations, behavior)?
3. Have the standards for acceptable performance been established for all the targeted participants and clients?
4. What are the assumptions upon which the program is based and that make up the program's theory of change? Has the theory of change been created?
5. What is its logic model? In other words, what are the inputs, activities, initial outcomes, intermediate outcomes, and intended results of this program? Has the logic model been created?
6. Do the program's theory of change and logic model make sense?
7. Do key stakeholders understand the program's theory of change?
8. Is this evaluation worth doing?

STEP 2: Formulate Evaluation Questions

1. What are the evaluation questions?
 - Program need
 - Program design
 - Program implementation
 - Program impact
 - Multiple use

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

2. How well do the evaluation questions reflect the interests of the primary users of the evaluation results?
3. How well do the evaluation questions align with the program's goals and purpose of the evaluation?
4. Are the evaluation questions:
 - Reasonable?
 - Appropriate?
 - Answerable?
 - Specific, regarding measurable or observable dimensions of program success or performance?
 - Specific, regarding the measure of program performance?

STEP 3: Construct the Evaluation Framework

1. Determine evaluator.
 - Who will conduct the evaluation?
 - Internal evaluator
 - External evaluator
 - Combination
 - Does the designated evaluator have the knowledge, skills, and resources to conduct the evaluation?
2. Decide how to answer evaluation question(s).
 - What are the key constructs (terms such as student achievement, improvement, increase, professional learning) that will be measured? How have they been defined so that they are clear and specific?
 - Does the evaluation question require making a comparison to determine impact? If so, what are possible comparison groups? Which is the most appropriate comparison group for this evaluation?
 - Cohort
 - Individual
 - Group
 - Panel
 - Generic
3. Create data plan.
 - Who or what is expected to change as a result of this professional learning program?
 - What types of changes are expected as a result of this professional learning program in the identified target audiences or organizational structures?
 - Knowledge
 - Attitudes
 - Skills
 - Aspirations
 - Behavior

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

- What data can provide evidence that the changes intended have occurred?
- What data collection methodology is most appropriate for the needed data?
- From whom or what will the data be collected?
- What are other possible sources of data to provide evidence of the intended change?
- How essential is it to have multiple data sources for this evaluation?
- When will the data be collected?
- Where will the data be collected?

4. Determine cost.

- Are needed resources including time, fiscal resources, and personnel available to conduct this evaluation?
- If resources are not adequate, what aspects of the evaluation plan can be modified without compromising the integrity of the evaluation?
- If resources are inadequate, how will the evaluation be affected?
- Is the evaluation worth doing?

STEP 4: Collect Data

1. Have the instruments and procedures for data collection been field tested?
2. What revisions are necessary?
3. How will data collectors be trained?
4. After early data collection, do any data seem redundant? What are the advantages and disadvantages of continuing to collect these data? Is it appropriate to continue or to discontinue collecting these data?
5. After early data collection, what data seem to be missing? Is it essential to collect these missing data? How will a new data collection methodology be implemented to collect these data?
6. What processes have been established to manage data collection and transfer?
7. What processes are established to ensure safekeeping and integrity of data?
8. If collecting quantitative data, what kinds of scores are needed to accurately reflect the data and to answer the evaluation questions?

STEP 5: Organize and Analyze Data

1. How will data be sorted, grouped, and arranged before analysis?
2. What method of data analysis is needed to answer the evaluation question?
 - Univariate analysis
 - Multivariate analysis
3. How will data be displayed to facilitate interpretation and understanding?
4. How will stakeholders be involved in the data analysis process?

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

STEP 6: Interpret Data

1. What do these data mean?
2. What findings (interpretations/claims) can be made from these data?
3. How well supported are the findings?
 - Major
 - Strong
 - Weak
 - Minor
 - Strong
 - Weak
4. Does this evaluation support claims of attribution or contribution?
5. Does this program have merit or worth?
6. What recommended actions can help the program stakeholders improve their programs and program impact?

STEP 7: Disseminate Findings

1. Will the evaluation reports be interim or final evaluation reports?
2. Who are the primary users of the evaluation report?
3. What components do the primary users want included in the evaluation report?
4. What format for reporting the results is most appropriate for the primary users of the evaluation report?
5. What other audiences are likely to want some version of the evaluation report?
6. What format for reporting the results is appropriate for other audiences?

STEP 8: Evaluate the Evaluation

1. How will the effectiveness of the evaluation be assessed?
2. What questions will guide the evaluation of the evaluation?
 - Resources
 - Design
 - Findings
 - Reporting
 - Evaluator
3. What stakeholders will be involved in the evaluation of the evaluation? How will they be involved?

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

List the Planning Goals and Objectives (See Step 1)

Intended results (stated in terms of student achievement): _____

Measurable objectives (specify as appropriate)	Students	Teachers	Principals	Central office	Organization (policy, practices, structures, systems, etc.)
K Knowledge					
A Attitudes					
S Skill					
A Aspirations					
B Behavior					

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

Make a Logic Model Planning Guide (See Step 1)

Intended results/goals (stated in terms of student achievement): _____

Inputs	Activities	Initial outcomes	Intermediate outcomes	Intended results

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

Create an evaluation framework (See Step 3)

Program goal: _____

Evaluation Framework

Measurable objectives/changes	Evaluation questions Formative and summative	Data/evidence needed	Data source	Data collection method	Data analysis method	Timeline	Responsible person(s)

Plan Professional Learning Implementation and Evaluation

TOOL 6.3, cont.

Evaluation framework: A sample

Evaluation questions	Data/evidence needed	Data source	Data collection method	Data analysis method	Timeline	Responsible person(s)
How frequently are teachers integrating technology into their mathematics lessons?	Teacher behavior	Teacher self-report	Survey	Count	Administer survey in May	Technology coordinator
		Principal observations	Logs	Count with description	Principal observations October through May	Principal
		Lesson plans	Artifacts	Quality analysis	Collect artifacts in February and May	Technology coordinator
How do students use technology in mathematics?	Student behavior	Student self-report	Interviews	Patterns	conduct student interviews in May	Graduate students
		Classroom assignments	Artifacts	Quality analysis	Collect artifacts in February and May	Technology coordinator
		Samples of student work	Artifacts	Quality analysis		
Is student achievement in mathematics increasing as expected?	Student knowledge and skills	State test	Artifacts	Comparing	April	District testing coordinator
		Classroom tests	Artifacts	Comparing	October-June	Teachers
		Student grades	Artifacts	Comparing	June	District testing coordinator

Source: Adapted from *Assessing Impact: Evaluating Staff Development*, by Joellen Killion, Oxford, OH: NSDC. Copyright 2003 by NSDC. Adapted with permission.

Plan Professional Learning Implementation and Evaluation

TOOL 6.4 Back to Planning Professional Learning Implementation and Evaluation Tools Chart

Connecting all the pieces: Mosaic approach to evaluation makes a complete picture

By Joan I. Heller, Kirsten R. Daehler, and Mayumi Shinohara

How can we tell what influence our professional learning efforts have on the teachers who participate in them, or on their classrooms or students? Teachers, learning environments, and students continually change for many reasons, and attributing changes in student learning to a particular professional learning experience is nearly impossible.

We used an evaluation mosaic (Heller, 1995) to seek evidence of the impact of a professional learning project in Science Cases for Teacher Learning. Guided by an evaluation framework, we conducted multiple interrelated studies. Any one of the studies is meaningful in itself, but the sum, like a mosaic, presents a broader picture and more convincing evidence than separate pieces.

When we found converging evidence of impact, we could argue not only that our work resulted in a coherent set of changes, but we also were able to trace reasons for negative results, helping us fine-tune the professional learning program.

Cascade of Influences

An evaluation framework has helped us integrate professional learning design with evaluation design in the project. The major outcomes expected from the project were clearly outlined (see chart on page 113).

With outcomes defined, we addressed several questions in our evaluation:

- Do the professional learning sessions have the features they were intended to have?
- Do participating teachers demonstrate shifts in thinking, knowledge, beliefs, and teaching practices consistent with the project's philosophy and objectives, and with the process and content of the actual sessions?
- Are such shifts accompanied by corresponding changes in these teachers' classrooms, with new and better opportunities for students to learn?
- Are these classroom changes accompanied by corresponding changes in what students know and can do?

Case-Based Model

Evidence from several studies (Weiss, Gellatly, Montgomery, Ridgeway, Templeton, & Whittington, 1999; Cohen & Hill, 1998; Birman, Desimone, Porter, & Garet, 2000; Hawley & Valli, 1999) shows student learning improves when teacher learning experiences:

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TOOL 6.4, cont.

- Focus on content;
- Are sustained over time; and
- Offer opportunities for professional dialogue and critical reflection.

The aim of the Science Cases for Teacher Learning Project is to develop teachers' pedagogical content knowledge (Shulman, 1986)—their understanding of what makes learning a science topic easy or difficult, and knowing how to present and explain the material to make it easier for learners to understand.

During the 2000–01 school year, we piloted a case-based curriculum for teachers in electricity and magnetism with nearly 50 3rd-, 4th-, and 5th-grade teachers from four San Francisco Bay area districts. Teachers met monthly over the school year in six to eight sessions for a total of 20 to 50 hours. Each three hour session began with a hands-on science investigation during which teachers actively learned science content using the same curriculum materials they use to teach students.

These investigations were linked to the teaching cases. The teachers then examined and discussed cases drawn from actual lessons with events that perplexed, surprised, or disappointed the teacher in whose classroom they occurred. Project staff had helped classroom teachers write these narratives, and the lessons included student work, student-teacher dialogue, descriptions of instructional materials and activities, teacher behaviors, and the teacher's thoughts. The cases stimulated in-depth discussions among teachers in groups guided by teacher-facilitators and staff.

In the case "A Complete Circuit is a Complete Circle," for example, a 4th-grade teacher taught a sequence of lessons on complete circuits. Despite careful planning and instruction, she was baffled to find her students still didn't understand how to make a bulb light. Using the case in the professional learning session, the participants were challenged to make a bulb light up using only a battery, a wire, and a small flashlight bulb. Then they compared what worked and what didn't to develop a working definition of a complete circuit.

After the science investigation, teachers worked in small groups to examine student thinking and analyze the instruction presented in the case. This led to a whole-group discussion, where teachers wrestled with the science content and explored alternative perspectives and solutions to the problem at the heart of the case. The facilitator helped focus and deepen the discussion, often asking teachers to draw diagrams and use hands-on materials or other resources to illustrate ideas.

No matter how carefully this professional learning experience was designed, though, we couldn't claim it worked without evidence. We particularly wanted to link teacher, classroom, and student impacts. The evaluation framework and mosaic approach gave us the means to take on the task and provided results from multiple data sources.

Plan Professional Learning Implementation and Evaluation

TOOL 6.4, cont.

Critical features of science case discussion method	Teacher outcomes	Classroom outcomes	Student outcomes
<p>Exploration of scientific meanings</p> <p>Teachers discuss, investigate, and think carefully about the meaning of specific science concepts in each case.</p>	<ul style="list-style-type: none"> Rich and accurate understanding of the science concepts in the cases. Confidence and positive attitude toward learning, doing, and teaching science. 	<ul style="list-style-type: none"> Discussion and activities focus on the meaning of science concepts. Science content meets grade-level expectations in accuracy and coverage. 	<ul style="list-style-type: none"> Accurate understanding of science concepts in the cases. Grade-level appropriate knowledge of science content. Ability to observe, look for patterns, and draw conclusions.
<p>Focus on student thinking</p> <p>Teachers examine and interpret student work, talk, and behaviors in each case to determine what students understand and are thinking.</p>	<ul style="list-style-type: none"> Heightened attention to student thinking. Understanding of what is important for students to know about the content. Knowledge about what makes science learning difficult for students. 	<ul style="list-style-type: none"> Instruction and assessment elicit and build on student thinking and deal directly with what is difficult for students. Curriculum addresses what is important for students to know about the content. 	<ul style="list-style-type: none"> Ability to avoid or move beyond misconceptions and errors. Skill in thinking and communicating scientifically.
<p>Critical analysis of practice</p> <p>Teachers analyze the effectiveness and coherence of instructional practices, activities, materials, and scientific representations in each case.</p>	<ul style="list-style-type: none"> Pedagogical reasoning that is analytical, complex, and detailed. Ongoing reflection about the effectiveness of instructional practices, activities, and materials. Skill in making science comprehensible to students. 	<ul style="list-style-type: none"> Instructional practices and materials communicate and develop the meaning of science concepts. Activities are coherent, structured sequences of inquiry. Instructional decisions are adjusted as a result of ongoing analysis of student understanding. 	<ul style="list-style-type: none"> In-depth understanding of science concepts. Ability to represent scientific meanings in a variety of ways.
<p>Experience in a learning community</p> <p>Teachers participate in a learning community where members engage in a process of collaborative inquiry about scientific ideas and phenomena and reflect on the teaching and learning of science.</p>	<ul style="list-style-type: none"> Ability to engage in and support collaborative inquiry. Deliberately plans instruction that supports collaborative inquiry. Believes that explanations and discussions are essential parts of learning science. 	<ul style="list-style-type: none"> Students engage in collaborative inquiry to make sense of scientific ideas. Students interact with each other to learn science. Students have opportunities to articulate and justify their scientific ideas and explanations. 	<ul style="list-style-type: none"> Skill in collaboratively making sense of science. Ability to articulate and justify scientific ideas and explanations.

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TOOL 6.4, cont.

Evaluation Framework

Developing an evaluation framework was an important step. We first made explicit the critical features of our professional learning model and then described theoretical connections between those features and target outcomes. We began to create this framework by identifying the major features of the science case discussion experience:

- Exploration of scientific meanings;
- Focus on student thinking;
- Critical analysis of practice; and
- Experience in a learning community.

Each feature also has associated teacher-, classroom-, and student-level outcomes. For example, exploring scientific meanings is intended to strengthen teachers' understanding of those concepts, which would influence student opportunities to learn through the way those concepts are taught, which would affect students' understanding of the concepts.

Putting these concepts in a matrix of columns and rows helped simplify the situation, although these aspects overlap and are interrelated. This framework is not intended to be prescriptive, linear, or hierarchical. It is a tool to help determine whether case discussions have an impact and, if so, what and where that impact may be. This evaluation framework evolved as the work proceeded. With each analysis, we gained a clearer understanding of both what might be important to look at and how to assess each aspect.

Research Approach

Building an evaluation mosaic required studying outcomes listed in the framework. We began by looking for evidence of an impact for individual cells under teacher and student outcomes that related to the project's focus on exploring scientific meanings, focus on student thinking, and critical analysis of practice.

We selected target outcomes in the evaluation framework to investigate using a combination of data collection methods, including written surveys, content tests, interviews, and focus group discussions to look at both the process and the project's outcomes. We conducted small-scale but intensive longitudinal studies, relying in part on tests given both before and after the case discussions to different cohort groups of teachers and their students. The studies also included comparisons between project and control groups.

Higher scores were measured for students of teachers who participated in case discussions

	Pre	Post
55%		
50%		
45%		
40%		
35%		
30%		

PROJECT STUDENTS
COMPARISON

Pre-test and post-test percentage correct scores on electricity and magnetism test for Oakland project participants' students (N=166) and Oakland comparison students (N=105).

Plan Professional Learning Implementation and Evaluation

TOOL 6.4, cont.

The evaluation revealed that teachers who participated in science case discussions were better able to describe students' conceptual difficulties, give examples of how these difficulties showed up in student work or performance, and more often made explicit links between specific student difficulties and instructional interventions (Daehler & Shinohara, 2001; Heller & Kaskowitz, 2002).

Also, students whose teachers took part in case discussions learned more. For example, a sample of 166 students of participating teachers scored significantly higher on a science content pre- to post-test, but comparable students of nonparticipating teachers showed no pre- to post-test gains (see graph at left). Students of all abilities taught by participating teachers showed significant gains from pre to post-test. Particularly encouraging was that low-performing students showed the most dramatic increase.

Final Comments

In this evaluation, we found significant gains in relation to each of the target outcomes we investigated from the evaluation framework. Teachers demonstrated better knowledge of science content, a striking increase in their pedagogical content knowledge, especially in their attention to student thinking, and reported changes in their teaching practices. We also found significant improvements in students' scores on a test of related science content. More participating teachers taught grade-level appropriate electricity and magnetism curriculum to their students than they had previously and than their colleagues did in comparable classrooms. Teachers shifted from having students engaged in isolated activities and unstructured hands-on exploration to structured sequences of inquiry activities, and teachers learned to use with their students the kinds of questioning strategies that group facilitators modeled. This pattern of results, taken together as pieces of an emerging mosaic, lend credence to the claim that the Science Cases for Teacher Learning Project had an effect on students' learning. The evaluation process helped the professional learning staff learn several valuable lessons:

Develop an evaluation framework at the beginning.

We knew the value of planning evaluation from a project's start, but this lesson was driven home when we worked together as a project-evaluator team to write our own evaluation framework. These discussions forced us to articulate, at a conceptual level, what the Science Cases for Teacher Learning Project was really about. It was tempting to decide on evaluation methods and instruments too quickly. Instead, we took the time to clearly describe the core features of our model. This forced the team to develop a common language and shared focus. We completed our first version of the evaluation framework by building a bridge of outcomes to link the professional learning we offered with logical, related outcomes for teachers, classrooms, and students. These conversations not only supported our formative evaluation, but they shaped the kind of summative data we would collect over the course of several years.

Plan Professional Learning Implementation and Evaluation

TOOL 6.4, cont.

Use an evaluation framework and mosaic approach to spend your evaluation dollars effectively.

In an era of accountability and limited money to support the evaluation of professional learning programs, it was critical to be specific about what we wanted to accomplish with teachers and then measure those outcomes. Our evaluation framework provided a clear target. It also helped us focus on what was most important vs. what was nice to do. For example, when someone had an additional good idea (like videotaping students doing a specific hands-on task) or wanted to look at something new, we could consult the framework and make strategic decisions about each choice in the context of the whole. The mosaic approach also helped us allocate our resources to best document the complexities of our results. Rather than spreading our evaluation pennies sparingly across every cell in the evaluation framework or clustering the resources around only a few outcomes, we prioritized the cells and then chose the instruments and methods.

Set yourself up to succeed by promising what's possible.

Evaluation can collect evidence only of what's actually there. If it will take time for your professional learning to have an impact on students, give teachers time before you seek evidence of student outcomes. Or if you think it will take time to refine the professional learning model, wait a year or two before collecting evidence of impact. This can be hard advice to follow and may involve drawing some lines with funders and the communities you serve. But it's an important part of openly and accurately communicating reasonable expectations, and it ultimately works to your benefit.

Understand that evaluation is a process and not an event.

We joke that we are now using the umpteenth version of our evaluation framework, and it has both grown and shrunk in terms of length and detail. Yet this review-and-revise process has both shaped and kept pace with our professional learn-

Quotes from participating teachers

"So much of the reason why it was more exciting and enjoyable was that it was in dialogue format, and almost none of our professional learning is. . . . This was based on the idea of drawing from us constantly, almost entirely, instead of telling us what to think about. . . . Nobody listens to us, ever, in other professional learning."

— *Oakland Unified School District (OUSD) focus group comment, April 2001*

"In the examination of the cases, we were able to discuss both the science concepts and the effectiveness of the instructional practices used, and the common misunderstandings of both children and teachers. In most science professional learning, it's mostly one or the other."

— *OUSD written survey response, April 2001*

"The biggest thing I got from the case studies was just a whole different type of questioning. . . . Before this, I was asking dead-end questions that just had an answer, like, 'What do you see?' . . . (Here we) had modeled types of . . . questions like 'What happens if . . . ?' 'Can you get it to work a different way?' 'Why do you think so?' 'Tell me more about . . . ' 'How else could we do it?' Those types of questions brought the science alive."

— *OUSD focus group comment, April 2001*

Plan Professional Learning Implementation and Evaluation

TOOL 6.4, cont.

ing work. By making our evaluation a process, we have been able gradually to collect pieces of the mosaic throughout the lifetime of the project. Because we used a mosaic approach that relied on converging evidence, when we got unexpected results in some cases, we had a more complete story to tell and a way to understand why this happened and what changes we needed to make in our program. Since we had clearly articulated strands (rows on the evaluation framework) and could show outcomes along a part of the strands, we could provide convincing evidence that change was happening, for both teachers and their students.

Pieces that formed the evaluation mosaic

We developed a number of pieces to evaluate the effect of the Science Cases for Teacher Learning Project. The results of these pieces helped form the evaluation mosaic.

Written Surveys

All participating teachers received a beginning- and an end-of year survey that included both closed and open-ended questions. The surveys contained questions about teachers' science backgrounds, preparedness, attitudes, pedagogy, and students' opportunities to learn. Post surveys incorporated items assessing teachers' perceptions of the value and impact of their participation and how they applied what they learned to their classroom instruction.

Content Assessment

We developed an electricity and magnetism test for both teachers and students. Some of the questions on the 30-minute assessment appeared on Trends in International Mathematics and Science Study and National Assessment of Educational Progress tests. Participating teachers took the content test at the beginning and end of the project year. Students took the test before and after they were taught a unit on electricity and magnetism.

Teacher Interviews

A subset of nine participating teachers was interviewed in depth at the beginning and end of the year to measure the project's impact on teachers' science content knowledge and pedagogical content knowledge (both understanding of student concept knowledge and instructional practices). The interview contained questions about teachers' perceptions of student difficulties, approaches to addressing those difficulties, and instructional approaches to helping students understand a specific problem. This combination of questions elicited detailed information about teachers' content knowledge, instructional strategies, reasoning about student knowledge, and pedagogical content knowledge. Interviews were analyzed using a rubric developed by reviewing the transcripts.

Adapted from "Connecting all the pieces: Mosaic approach to evaluation makes a complete picture" by Joan I. Heller, Kirsten R. Daehler, and Mayumi Shinohara (2003), *JSD*, 24(4). Copyright 2003 by NSDC. Adapted with permission.

Plan Professional Learning Implementation and Evaluation

TOOL 6.5 Back to Planning Professional Learning Implementation and Evaluation Tools Chart

Sample logic model for collaborative professional learning teams

Inputs/resources	Actions	Initial outcomes	Intermediate outcomes	Results
<ul style="list-style-type: none"> Teaching resources for unit development. Team meeting time to score baseline writing assessments, develop units and common assessments, analyze student results, form and reevaluate flexible groupings, etc. 	<ul style="list-style-type: none"> Analyze data from fall writing sample. 	<ul style="list-style-type: none"> Teachers identify students' baseline writing level. 	<ul style="list-style-type: none"> Teachers group students in flexible groupings for instruction in conventions, ideas, and organization. 	<p>20% increase in student scores on the state writing sample in two years.</p>
<ul style="list-style-type: none"> Support from district language arts specialist to assist with design of units. 	<ul style="list-style-type: none"> Design three common instructional units for ideas and organization to use between October and February. 	<ul style="list-style-type: none"> Teachers use units in their classrooms. 	<ul style="list-style-type: none"> Students practice applying ideas and organization in writing assignments in all content areas. 	
<ul style="list-style-type: none"> Support from the district language arts specialist to assist with the development of common writing assessments. 	<ul style="list-style-type: none"> Develop and administer two common benchmark assessments of writing, one in November and one in February. 	<ul style="list-style-type: none"> Teachers administer and score common assessments. 	<ul style="list-style-type: none"> Teachers analyze data from the assessments to determine which students require reteaching and additional support. 	
<ul style="list-style-type: none"> Cooperation of science and social studies teachers to embed the use of ideas, organization, and conventions in their writing scoring tools. 	<ul style="list-style-type: none"> Develop daily practice activities for language conventions. 	<ul style="list-style-type: none"> Students complete daily activity to practice language conventions. 	<ul style="list-style-type: none"> Students demonstrate increased accuracy in use of language conventions in both oral and written language. 	
<ul style="list-style-type: none"> Support from teachers to provide feedback and additional instruction to students on ideas, organization, and conventions. 	<ul style="list-style-type: none"> Provide students ongoing feedback, reteaching, and additional support, as needed, on ideas, organization, and conventions. 	<ul style="list-style-type: none"> Students' accurate use of ideas, organization, and conventions increases in their classroom work. 	<ul style="list-style-type: none"> Students' accurate use of ideas, organization, and conventions increases on common benchmark assessments. 	

Plan Professional Learning Implementation and Evaluation

TOOL 6.6 Back to Planning Professional Learning Implementation and Evaluation Tools Chart

Sample evaluation questions and evidence

Use this tool as a model for designing evaluation questions and determining what evidence might be used to answer the questions.

Purpose	Provide a model of evaluation questions and evidence needed to answer the questions.
Non-purpose	Serve as the single best example of evaluation questions and evidence of achievement of educator professional learning goals.

The following table identifies the single student learning goal, the educator professional learning objectives, the evaluation questions, and evidence needed to answer the questions.

Goals/Objectives	Evaluation questions	Evidence
<p>Student Learning Goal: Improve student achievement in rational numbers by 15% on annual mathematics assessments through professional learning focused on increasing teachers' content knowledge and content-specific pedagogy.</p>	<ul style="list-style-type: none"> • Did student achievement in rational numbers increase by 15% from the previous year's scores on the annual mathematics assessment? • Did achievement for all student subgroups increase by 15% or more? 	<ul style="list-style-type: none"> • Aggregated and disaggregated student scores on the previous and current years' annual mathematics assessment.
<ul style="list-style-type: none"> • Increase teachers' content knowledge and precision in content vocabulary related to rational numbers as evident in lesson plans and instructional materials. KNOWLEDGE 	<ul style="list-style-type: none"> • Did teachers' understanding of rational numbers increase by at least 20% as measured an analysis of lesson plans and instructional materials? 	<ul style="list-style-type: none"> • Pre- and post-lesson plans and instructional materials (student assignments, formative assessments, displays, etc.) analyzed using a rubric.
<ul style="list-style-type: none"> • Increase teachers' accuracy and frequency of use of questioning strategies in math instruction by at least two levels as described in the IC maps. SKILLS, ATTITUDES, ASPIRATIONS, & BEHAVIORS 	<ul style="list-style-type: none"> • Are teachers demonstrating accurate and frequent use of questioning techniques in their daily instruction as described in the IC Maps? 	<ul style="list-style-type: none"> • Trend analysis of principal walk-through, peer observation, and coaching observation data using the IC maps as the criteria for observations. • Teacher pre-and post-self-assessments using the IC map.

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TOOL 6.6, cont.

<ul style="list-style-type: none"> • Increase students' ability to explain their thinking as they solve rational number problems by two levels as described on the IC maps. <p>KNOWLEDGE & SKILLS</p>	<ul style="list-style-type: none"> • Are students explaining their thinking as they solve problems involving rational numbers as described in the IC Map for student thinking in math? 	<ul style="list-style-type: none"> • Student pre- and post-self assessment using the IC maps. • Teacher pre- and post-assessment of individual student's thinking using the IC map. • Student pre- and post-writing samples explaining their mathematics thinking.
<ul style="list-style-type: none"> • Increase students' achievement on benchmark assessments on rational number problems. <p>KNOWLEDGE & SKILLS</p>	<ul style="list-style-type: none"> • Did student performance on the six-week benchmark assessments increase by 10% from previous assessment over the school year on rational number problems? 	<ul style="list-style-type: none"> • Student pre- and post-test assessment scores on the unit pre-test and benchmark post-test. • Student performance on benchmark assessment compared to previous year's student performance on same benchmark assessment.

Plan Professional Learning Implementation and Evaluation

TOOL 6.7 Back to Planning Professional Learning Implementation and Evaluation Tools Chart

Mapping an evaluation step by step

Use this sequence map to plan, conduct, and report on an evaluation of professional learning.

Purpose	Outline the process for planning, conducting, and reporting an evaluation of professional learning.
Non-purpose	Plan professional learning
Mapping an Evaluation: Step by Step	<ol style="list-style-type: none"> 1. What is the purpose of this evaluation? 2. Who are the primary users of the evaluation results? 3. What is their intended plan for using the results?
Step One: Assess Evaluability	<ol style="list-style-type: none"> 1. What are the program’s goals? Are they plausible, student-focused and results-oriented? 2. What are the program’s objectives? <ul style="list-style-type: none"> • Are they measurable? • Do they specify the intended change (knowledge, attitudes, skill, aspirations, behavior)? 3. Have the standards for acceptable performance been established for all the intended participants and clients? 4. What are the assumptions upon which the program is based and that make up the program’s theory of change? Has the theory of change been created? 5. What is its logic model? In other words, what are the inputs, activities, initial outcomes, intermediate outcomes, and intended results of this program? Has the logic model been created? 6. Does the program’s theory of change and logic model make sense? 7. Do key stakeholders understand the program’s theory of change? 8. Is this evaluation worth doing?

Plan Professional Learning Implementation and Evaluation

TOOL 6.7, cont.

<p>Step Two: Formulate evaluation questions</p>	<ol style="list-style-type: none"> 1. What are the evaluation questions? <ul style="list-style-type: none"> • Program need • Program design • Program implementation • Program impact • Multiple use 2. How well do the evaluation questions reflect the interests of the primary users of the evaluation results? 3. How well do the evaluation questions align with the program’s goals and purpose of the evaluation? 4. Are the evaluation questions: <ul style="list-style-type: none"> • Reasonable? • Appropriate? • Answerable? • Specific, regarding measurable or observable dimensions of program success or performance? • Specific, regarding the measure of program performance?
<p>Step Three: Construct the evaluation framework</p>	<ol style="list-style-type: none"> 1. Determine evaluator <ol style="list-style-type: none"> a) Who will conduct the evaluation? <ul style="list-style-type: none"> • Internal evaluator • External evaluator • Combination b) Does the designated evaluator have the knowledge, skills, and resources to conduct the evaluation? 2. Decide how to answer evaluation question(s) <ol style="list-style-type: none"> a) What are the key constructs (i.e. terms such as student achievement, improvement, increase, professional learning) that will be measured? b) How have they been defined so that they are clear and specific? c) Does the evaluation question require making a comparison to determine impact? If so, what are possible comparison groups? Which is the most appropriate comparison group for this evaluation? <ul style="list-style-type: none"> • Cohort • Individual • Group • Panel • Generic

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TOOL 6.7, cont.

<p>Step Three: Construct the evaluation framework, continued</p>	<p>3. Create data plan</p> <p>a) Who or what is expected to change as a result of this professional learning program?</p> <p>b) What types of changes are expected as a result of this professional learning program in the identified target audiences or organizational structures?</p> <ul style="list-style-type: none"> • Knowledge • Attitudes • Skills • Aspirations • Behaviors <p>c) What data can provide evidence that the changes intended have occurred?</p> <p>d) What data collection methodology is most appropriate for the needed data?</p> <ul style="list-style-type: none"> • From whom or what will the data be collected? • What are other possible sources of data to provide evidence of the intended change? • How essential is it to have multiple data sources for this evaluation? <p>e) When will the data be collected?</p> <p>f) Where will the data be collected?</p> <p>4. Determine cost</p> <p>a) Are needed resources including time, fiscal resources, and personnel available to conduct this evaluation?</p> <p>b) If resources are not adequate, what aspects of the evaluation plan can be modified without compromising the integrity of the evaluation?</p> <p>c) If resources are inadequate, how will the evaluation be affected?</p> <p>d) Is the evaluation worth doing?</p>
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Plan Professional Learning Implementation and Evaluation

TOOL 6.7, cont.

<p>Step Four: Collect data</p>	<ol style="list-style-type: none"> 1. Have the instruments and procedures for data collection been field-tested? 2. What revisions are necessary? 3. How will data collectors be trained? 4. After early data collection, do any data seem redundant? What are the advantages and disadvantages of continuing to collect these data? Is it appropriate to continue or to discontinue collecting these data? 5. After early data collection, what data seem to be missing? Is it essential to collect these missing data? How will a new data collection methodology be implemented to collect these data? 6. What processes have been established to manage data collection and transfer? 7. What processes are established to ensure safekeeping and integrity of data? 8. If collecting quantitative data, what kinds of scores are needed to accurately reflect the data and to answer the evaluation questions?
<p>Step Five: Organize and analyze data</p>	<ol style="list-style-type: none"> 1. How will data be sorted, grouped, arranged before analysis? 2. What method of data analysis is needed to answer the evaluation question? <ol style="list-style-type: none"> a. Univariate analysis b. Bivariate analysis c. Multivariate analysis 3. How will data be displayed to facilitate interpretation and understanding? 4. How will stakeholders be involved in the data analysis process?
<p>Step Six: Interpret data</p>	<ol style="list-style-type: none"> 1. What do these data mean? 2. What findings (interpretations/claims) can be made from these data? 3. How well supported are the findings? <ul style="list-style-type: none"> Major Strong Weak Minor Strong Weak 4. Does this evaluation support claims of attribution or contribution? 5. Does this program have merit or worth? 6. What recommended actions can help the program stakeholders improve their program and its impact?

Plan Professional Learning Implementation and Evaluation

TOOL 6.7, cont.

<p>Step Seven: Disseminate findings</p>	<ol style="list-style-type: none"> 1. Will the evaluation reports be interim or final evaluation reports? 2. Who are the primary users of the evaluation report? 3. What components do the primary users want included in the evaluation report? 4. What format for reporting the results are most appropriate for the primary users of the evaluation report? 5. What other audiences are likely to want some version of the evaluation report? 6. What format for reporting the results is appropriate for the other audiences?
<p>Step Eight: Evaluate the evaluation</p>	<ol style="list-style-type: none"> 1. How will the effectiveness of the evaluation be assessed? 2. What questions will guide the evaluation of the evaluation? <ol style="list-style-type: none"> a) Resources b) Design c) Findings d) Reporting e) Evaluator 3. What stakeholders will be involved in the evaluation of the evaluation? How will they be involved?

Source: Adapted from *Assessing Impact: Evaluating Staff Development* (pp. 205–208) by Joellen Killion, 2008, Thousand Oaks, CA: Corwin Press and NSDC. Copyright 2008 by Corwin Press. Adapted with permission.

Plan Professional Learning Implementation and Evaluation

TOOL 6.8 Back to Planning Professional Learning Implementation and Evaluation Tools Chart

Evaluation framework

Use this basic framework to plan and conduct an evaluation of professional learning.

Purpose	Provide a template for planning an evaluation of professional learning and a guide for conducting the evaluation.
Non-purpose	Provide a guide for all decisions and actions related to evaluating professional learning.

Goals/ Objectives	Types of changes What kinds of changes will occur as a result of professional learning?	Evaluation questions What questions do we want to answer about the changes occurring in professional learning?	Data sources Who or what will provide the evidence needed to answer the questions (people, documents, artifacts, assessments, etc.)?	Data collection methods How will we collect the evidence?	Data analysis How will the data/evidence collected be analyzed?	Time line When will the data be collected?	Parties responsible Who is responsible for preparing the data collection tools, collecting the data, analyzing the data, preparing and reporting the findings to stakeholders and participants?

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.1 Back to Implementing, Evaluating, and Sustaining Professional Learning Tools Chart

Implementation: Learning builds the bridge between research and practice

By Gene E. Hall and Shirley M. Hord

One indisputable finding from our years of research on what it takes to conduct successful change in schools and colleges is this: Introducing new practices alone seldom results in new practices being incorporated into ongoing classroom practices.

For example, we were dismayed at the recent release of two substantive studies of professional learning (to support school improvement in mathematics and reading) that concluded that the professional learning in each case was ineffective (Drummond et al., 2011; Randel et al., 2011). However, in both studies, the researchers did not assess implementation. It is hard to imagine how professional learning can be judged if its implementation has not been documented. Such work, it would seem, is “the appraisal of a nonevent” (Charters & Jones, 1973).

We are happy to join with Learning Forward in recognizing the imperative of implementation. The Implementation standard states: Professional learning that increases educator effectiveness and results for all students applies research on change and sustains support for implementation of professional learning for long-term change.

Assuring Professional Learning

It has only been in the last decade that we have come to understand the reality that change is based on learning. The profession, the press, and the public cry for school improvement, in order that all students learn to high levels. For school improvement to be realized, the first task is to identify and delete those programs and practices that are not supporting students in learning well. The next step is to find the best solution having the potential to promote quality teaching and successful student learning. After specifying the new practice(s), teachers and administrators must learn what the new practices are and how to use them, and transfer the new way into classroom practice. See diagram on page 131.

“Change is learning. It’s as simple and complex as that.” This is the first principle in our beliefs and assumptions about change (Hall & Hord, 2011, p. 6). Change cannot occur without professional learning. When educators adopt new and more effective practices, the next step is to develop new understandings and acquire

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.1, cont.

new skills. These new practices, in turn, enable students to reach high levels of successful learning. The seven Standards for Professional Learning are intended make high-quality professional learning a reality.

Applying Change Process Research

Within the Implementation standard is the explicit acknowledgement that findings from change research, including its constructs and measures, can inform efforts to implement the standards. The explicit purpose of the Implementation standard is to ensure that educators address implementation and apply evidence-based strategies. Change research constructs and measures can be used to develop implementation strategies and assess progress.

In many ways, today's innovations and initiatives represent major change. These changes are complex, subtle, and more sophisticated than we think. Symbolically, it is as if implementers were expected to back up, get a running start, and leap across the Grand Canyon. What is needed is an Implementation Bridge (Hall, 1999; Hall & Hord, 2011). See diagram on page 131.

As with real bridges, different change efforts require varying lengths, degrees of stability, and combinations of supports. It takes time to move across a bridge. By assessing how far across the bridge each participant, group, and school has progressed, formative evaluations can inform change leaders of participants' needs. Formative evaluations are important for assessing progress. Summative evaluations, which assess the effectiveness of the innovation, should only include those participants who have made it all the way across the bridge.

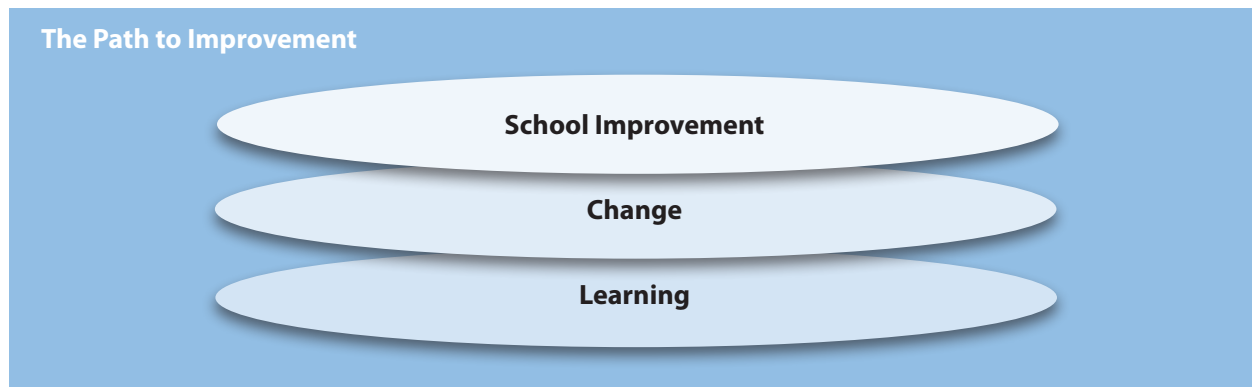
When change is assumed to be an event, there is no bridge. Implicitly, adopters of the new approach are expected to make a giant leap across a chasm. With today's complex innovations, the chasms are likely to be deep and wide. Attempting to jump across these chasms is most likely to result in injury and failure. This is true for individuals, schools, school districts, and larger systems.

The Implementation Bridge is a metaphor for moving from the earlier or less advanced stages to the later or more advanced stages of the three diagnostic dimensions of the Concerns-Based Adoption Model (CBAM): Stages of Concern, Levels of Use, and Innovation Configuration. Each of these CBAM elements is an evidence-based construct with related measuring tools that can be used to assess how far across the bridge each individual, school and/or district has progressed. Each can be used alone or in various combinations to measure implementation progress and as diagnostic information for planning next action steps to facilitate moving further across the bridge. Each also is important in summative evaluations. These three tools, individually and collectively, can be applied to implementation of the Standards for Professional Learning.

The following are brief descriptions of each of these diagnostic dimensions. More can be learned through the study of key texts (Hall & Hord, 2011), various technical documents, and related training resources.

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.1, cont.



Stages of Concern addresses the personal/affective aspects of change. There is an array of feelings, perceptions, worries, preoccupations and moments of satisfaction for those engaged with implementing new approaches. This personal side of change is important to understand because failing to address concerns can lead to resistance and even rejection of the new way. A set of categories, or “stages,” of concern has been identified. As a change process unfolds, these different Stages of Concern can increase and decrease in intensity.

At the very beginning of a change, most participants will be **unconcerned**. Their attention will be on getting through the school year and planning for summer. These participants are not on the bridge. They may be aware that they are approaching a bridge—“I heard something about some sort of new standards, but I am really concerned about . . .” —but it is not something that needs to be thought about currently. However, the change process leaders should be doing things to address this concerns stage—for example, providing general information about what will be happening.

As participants begin to step out on to the Implementation Bridge, **self** concerns become more intense. “What do these new standards mean for me?” This, too, is a time when more information should be provided. It also is important to be reassuring: “You can do this. We are here to support you.”

As implementers move fully onto the bridge, **task** concerns become most intense: “I am spending all my time organizing materials and trying to schedule everything.” These concerns should be anticipated and addressed in the implementation plan. How-to supports, including coaching and timeline projections, should reflect the understanding that these concerns can last several years.

When implementers make it across the bridge, self and task concerns should decrease while **impact** concerns should increase. “I am seeing how my use of the these standards is making a big difference in the knowledge and skills of teachers and school leaders. You can now see the results in what students are doing.” How leaders address the potential arousal of impact concerns can make all the difference in ultimate implementation success and effectiveness.

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.1, cont.

There are two other CBAM constructs and measures that can be applied with the Implementation Bridge metaphor.

Innovation Configuration (IC) address the well-documented fact that each implementer does not necessarily use the same operational form of the change. Those involved may say they are using “it,” but what is in operation within each classroom and school can be significantly different. In our first study of this phenomenon, teachers in different states claimed that they were team teaching. But the configurations of teaming were quite different. The number of teachers (two to six), the grouping of students (fixed, heterogeneous, homogenous), and what teachers taught (all subjects, one subject) were components that varied. Each combination of these variations results in a different Innovation Configuration—what the innovation looks like in practice—with different teachers and in different schools.

In recent years researchers have become very interested in fidelity of implementation. Innovation Configuration is a way to describe and contrast different implemented forms of an innovation. With the Implementation Bridge metaphor, there should be increasing fidelity in terms of Innovation Configuration as implementers move further across.

Levels of Use is the third construct from change research to consider. Traditional research and program evaluation designs assume a dichotomous population: treatment group and control group, or users and nonusers. Levels of Use describes a set of behavioral profiles that distinguish different approaches to using an innovation. Three different nonuser profiles have been described and five different user profiles. Each of these has been defined in terms of behaviors and each has implications for how to facilitate change and for evaluating change success and effectiveness.

For example, educators at **Level 0 Nonuse** are not doing anything related to the change, in this case the new professional learning standards. They don’t talk about it, they don’t check it out on the web, and they do not attend an introductory meeting. This behavioral profile is different from the person at **Level I Orientation**, who asks questions, attends the introductory meeting, and considers use of the innovation. Both of these levels represent people who are not using the change. However, in terms of facilitating a change process, the interventions that should be emphasized for each are quite different.

Among the Levels of Use, one that is particularly important is **Level III Mechanical Use**. This is an approach where the implementer is disjointed in what he or she is doing. Implementers at this level continually check back to the user manual, their scheduling is inefficient, they can’t plan beyond tomorrow, or anticipate what will happen next week. We know from research that most first-time implementers will be at Level III Mechanical Use. We also know that many will continue to be at this level through the first two or three years of implementation. If the inefficiencies of Level III use are not addressed, then the Implementation Bridge can become very long, and some implementers will jump off.

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.1, cont.

There are many implications of Level III Mechanical Use. One that will be particularly important with the new standards is deciding when and with whom summative evaluation studies should be conducted. Change research has clearly documented that most first-time users will be at Level III Mechanical Use. These are not the implementers who should be included in a summative evaluation study. They are inefficient and have not reached full understanding of how to use the new way. Summative evaluation samples should be comprised of implementers who have made it across the bridge. They have established routines and can predict what will happen next. They have established routines and can predict what will happen next. This behavioral profile is **Level IV-A Routine**. When summative evaluations include many first-time users, it is not surprising that there are no significant differences in outputs.

Providing feedback about how the change process is unfolding is important. Each of the CBAM diagnostic dimensions described here can be used to measure how far across the Implementation Bridge each teacher, school, or district has progressed. The same constructs and data should be used as feedback to leaders and implementers. These data can be used to plan next steps.

Providing Feedback

Another key theme in the Implementation standard is providing constructive feedback. Providing feedback about how the change process is unfolding is important. Each of the CBAM diagnostic dimensions described here can be used to measure how far across the Implementation Bridge each teacher, school, or district has progressed. The same constructs and data should be used as feedback to leaders and implementers. These data can be used to plan next steps for making further implementation progress. These data also can be used in reports about implementation progress. In addition, these same data can be used in summative evaluations that relate the extent of implementation to outcomes.

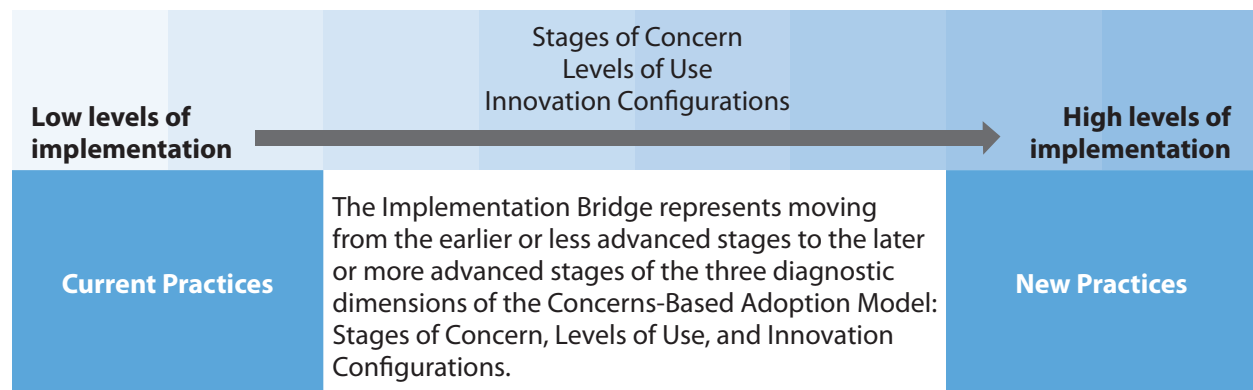
Assessing implementation at regular intervals and providing feedback to all participants are important keys to implementation success.

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.1, cont.

Sustaining Changes Beyond Implementation

We know a lot through research, practice, and theory about how to launch a change process, facilitate movement across an Implementation Bridge, and assess implementation progress and evaluate innovations. What we know less about are the essential elements and processes that are necessary to sustain long-term use of an innovation. Getting across the bridge is necessary, but what are the processes and structures that assure continuing use of high-fidelity configurations, in this case, of the standards? How do we prevent abandonment? Addressing the sustainability challenges of the latest standards will need special attention.



One indicator of sustainability will be when the implemented Standards for Professional Learning have a line item in the school or district budget. Another will be when it becomes regular practice for new staff to have access to learning and development. Still another important indicator will be that the process and criteria for succession of principals and relevant staff at the district office includes evidence of their understanding and interest in supporting professional learning through the standards. Above all, school and district leadership will provide continuous attention and direct the attention of others to the standards' value. These leaders become the internal and external champions for sustaining the standards and a continued focus on professional learning.

Supporting and celebrating the standards and their practices are keys to the standards' robust sustainability and the capacity to contribute richly to the ultimate goal—student learning success.

We see this standard as uniquely significant in that the standards revision architects explicitly identified the importance of addressing implementation. A strength of the Implementation standard is its reference to change process research that can be applied to assessing and guiding the implementation of professional-learning. Understanding that change begins with the learning of educational professionals is crucial. Only through increasing adult learning will we increase student learning.

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.1, cont.

The key to progress is to stay focused

By Raymond Aguilera and Olivia Zepeda

As told to Valerie von Frank

Our district is committed to supporting teachers with ongoing professional learning to enable them to become more effective in the classroom. We provide early release time on Wednesdays to enable teachers to meet in learning teams, but the power is in the classroom in jobembedded learning because the classroom is where we can identify teachers' needs and give teachers assistance during instruction.

We monitor instruction closely and analyze data. We give districtwide benchmark assessments four times a year, along with weekly formative assessments. As we monitor data, we have immediate intervention if we do not see student growth. Every year, we get better. With assistance from SEDL, we use the Concerns-Based Adoption Model to determine how well teachers are implementing new practices in teaching reading and writing.

Consultants and administrators meet monthly to discuss teachers' levels of use of the new practices. This approach helps us to differentiate professional learning. After they determine teachers' levels of use, we create individualized plans for teachers' learning. Consultants and coaches work with teachers in their classrooms, providing feedback, coaching, and modeling lessons.

Gadsden Elementary School

District #32

San Luis, Ariz.

Number of schools: 9

Enrollment: 5,000

Staff: 260

Racial/ethnic mix:

White: 0%

Black: 0%

Hispanic: 99%

Asian/Pacific Islander: 0%

Native American: 0%

Other: 1%

Limited English proficient: 50%

Free/reduced lunch: 97%

Contact: Raymond Aguilera,
superintendent

Email: agui2400@yahoo.com

At our annual data summit, about 100 teachers and administrators reviewed and analyzed student achievement data and developed formal plans for achieving academic goals. We provide three days before the beginning of the school year for teachers to attend district professional learning based on individualized plans. The professional learning is supported in a variety of ways, from having a master teacher go into a classroom to help the teacher with materials to having master teachers model lessons.

The National Association for the Education of Young Children has accredited San Luis Preschool and created a video showing the school as a model for the nation. The district has worked hard to demonstrate how preschool teachers can incorporate a research-based curriculum into a play-based philosophy while taking into account factors such as English language learners and children with special needs.

One of our primary areas of focus has been English language learning. We are proud that, over the last two years, more than 1,800 students learning English were reclassified as English-fluent. Over the last 10 years, the percentage of ELL students has decreased in the district from 99% to 50% of our student body. The keys to our progress are job-embedded professional learning and our focus. It's critical to stay focused on a few initiatives. The district administration's role is to provide stability.

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.1, cont.

Raymond Aguilera (agui2400@yahoo.com) is superintendent and Olivia Zepeda (ozepeda@gesd32.org) is assistant superintendent of Gadsden Elementary School District #32 in San Luis, Ariz. Valerie von Frank (valerievonfrank@aol.com) is an education writer and editor of Learning Forward's books.

Gene Hall (gene.hall@unlv.edu) is a professor of educational leadership at the University of Nevada, Las Vegas. His research focuses on understanding, evaluating, and facilitating change processes in organizations.

Shirley Hord (shirley.hord@learningforward.org) is scholar laureate of Learning Forward and former scholar emerita at Southwest Educational Development Laboratory, Austin, Texas. She writes about school-based professional learning, leadership, school change and improvement, and professional learning communities.

Source: Adapted from "Implementation: Learning Builds the Bridge Between Research and Practice," by Gene E. Hall and Shirley M. Hord, 2011, *JSD*, 32(4), pp. 52–53; 55–57. Copyright 2011 by Learning Forward. Adapted with permission.

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.2 Back to Implementing, Evaluating, and Sustaining Professional Learning Tools Chart

Clarify your vision with an Innovation Configuration map

By Joan Richardson

After three years of implementing a new writing program, teachers in Arizona's Gadsden Elementary School District #32 were still confused about how they were supposed to be teaching writing.

"We had inconsistent implementation. Often, teachers were calling the same practices and components by different names," said Olivia Elizondo Zepeda, Gadsden's assistant superintendent.

As a result, students were not making the progress the district wanted.

Then the district began working with Shirley Hord, a consultant with the Southwest Educational Development Laboratory, who introduced the district to Innovation Configuration maps (ICs). Hord is one of the original developers of IC maps, a tool that educators can use to identify expectations about a new program or other innovation.

"When she mapped the components of the writing program, it was very evident that nobody really knew what the focus of the writing program really was. It was amazing to us that after three years of professional learning and implementation we were still confused," Zepeda said.

Now, "our results are incredible," she said. Gadsden's 6th-grade writing results on the statewide assessment soared from 45% in 2005 to 82% in 2006. Fifth-grade results remained about the same, but 4th-grade results in writing moved from 28% proficient in 2005 to 69% proficient in 2006.

"With an IC, there is no misunderstanding; we have developed a common language. It's just very, very clear. It's clear for the people who are training. It's clear for the principals who know what to look for when they do a walk through. It's clear for the teachers," Zepeda said.

An Innovation Configuration map clarifies what a program or practice—the innovation—is and is not. The IC creates a vision of what a new program or practice looks like in use by spelling out what is ideal and what is not acceptable. An IC map also shows the stages that a teacher might move through as he or she moves toward ideal practice.

Learning Forward developed a series of IC maps to describe the responsibilities of 11 different role groups for implementing Standards for Professional Learning. In the same way, educators can use IC maps to measure implementation of a new math or reading program, use of cooperative learning strategies, or differentiation strategies.

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.2, cont.

Patricia Roy, one of the co-authors of NSDC's standards IC maps, said developing and using an IC map helps everyone involved with a new implementation. "People who do training always think they are being crystal clear about explaining new practices. They can't even imagine some of the ways that new ideas might be implemented. But, when you're training, you don't always know what it is that people heard. ICs help with getting a clear picture," she said.

Hord and Roy both say that individuals who are involved with a new program or practice—teachers and principals—should be involved in writing the IC map for the implementation. Hord recommends seeking assistance from an expert during the initial writing of an IC.

"The most powerful part of the IC is that it brings the group together to discuss and debate it. As they do that, they are clarifying what this thing is," Hord said.

Another Arizona school district, Chinle Unified School District #24, also developed an IC map to guide its instruction in writing. Nearly all of Chinle's 4,000 students are Native Americans, most of whom live in poverty.

After attending a 6 + 1 Traits™ of Writing workshop, a group of Chinle teachers wrote their own IC map for implementing that model of writing instruction. They used the components identified by 6 + 1 Traits™ of Writing and then wrote five levels of implementation for each of the components. They identified the levels of implementation as highly effective, satisfactory, needs improvement, unsatisfactory, and wrong direction. (See sample of Chinle's IC map on page 142.)

Steve Brown, Chinle's school improvement coordinator, said five teachers spent about 15 hours developing the IC maps. "We were lucky because we had some teachers who were well trained in (6 + 1 Traits™ of Writing) before we tried to develop the ICs," Brown said.

These teachers used the IC maps as they instructed other teachers during a series of workshops. After each session, teachers returned to their classrooms with something specific to implement, Brown said.

Chinle asked teachers to use the IC maps to assess their writing instruction. After several months of implementation, the district asked teachers to use the maps for a second self-assessment. "We would have run up against a brick wall if we had anything that looked like an evaluative piece. We have learned to be very careful about making sure that teachers understand that this is a tool for coaching and for monitoring their own work," said Mike Reid, Chinle's director of federal programs.

Brown agreed. "Developing the maps went really smoothly. But during implementation, you have to go more slowly. Administrators have to be careful that this is used as a program evaluation, not teacher evaluation and to make sure teachers know that this is for their own use," he said.

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.2, cont.

Like Gadsden, Chinle also experienced significant results on Arizona's statewide writing assessment after using the IC maps. Sixth graders scored 95% proficient in 2006, up from 59% proficient in 2005. Fifth graders remained about the same after making steady gains from the low 30s to the mid- to high 70s over four years. Fourth graders moved from an already high 65% proficient in 2005 to 85% proficient in 2006.

Elizondo agrees that IC maps are best used as self-evaluation tools for teachers. But as teachers become more comfortable using IC maps and more accustomed to looking at student data, Elizondo said principals have been able to show that teachers who are moving closer to the ideal of implementation have students who are achieving more.

"Teachers can look at the IC maps and see what they are missing and what they need to do. They identify their own areas of weakness. That's very good," she said.

Source: Adapted from "Clarify Your Vision With an Innovation Configuration Map" by Joan Richardson, 2007, *Tools for Schools*, 11(1), pp. 1-2. Copyright 2007 by NSDC. Adapted with permission.

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.2, cont.

Example of an Innovation Configuration for one of Learning Forward’s Standards for Professional Learning

Learning Communities Standard: Professional learning that improves the learning of all students organizes adults into learning communities whose goals are aligned with those of the school and district.

The Teacher

Desired Outcome 1.1: Meets regularly with colleagues during the school day to plan instruction.					
<p>Level 1 Meets regularly with learning team during scheduled time within the school day to develop lesson plans, examine student work, monitor student progress, assess the effectiveness of instruction, and identify needs for professional learning.</p>	<p>Level 2 Meets regularly with learning team during the school day to plan instruction, examine student work, and monitor student progress.</p>	<p>Level 3 Works with learning team on special instructional projects during planning time.</p>	<p>Level 4 Works with others on non-instructional issues. Addresses personal concerns, not group issues.</p>	<p>Level 5 Uses planning time for individual planning.</p>	<p>Level 6 Uses planning time for non-instructional tasks (e.g. management, personal tasks).</p>

Desired Outcome 1.1: Meets regularly with colleagues during the school day to plan instruction.					
<p>Level 1 Participates frequently with all professional staff members to discuss, document, and demonstrate how their work aligns with school and district goals. Engages in professional learning with colleagues to support this work.</p>	<p>Level 2 Aligns the work of the learning team with school-wide goals. Works in a learning team (grade-level, subject matter, interdisciplinary, vertical) to address issues related to the grade or subject area.</p>	<p>Level 3 Works in a learning team (grade-level, subject matter, interdisciplinary, vertical) to address issues related to specific grade or subject area.</p>	<p>Level 4 Works alone; addresses individual issues rather than school or grade-level issues.</p>		

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.2, cont.

Desired Outcome 1.3: Participates in learning teams, some of whose membership extends beyond the school.					
Level 1 Participates in state, regional, districtwide, and/or national networks. Participates in interdisciplinary or subject matter/grade-level learning teams.	Level 2 Participates in districtwide and regional networks and interdisciplinary or subject matter/grade-level learning teams.	Level 3 Participates in both interdisciplinary and subject matter/grade-level learning teams within the district.	Level 4 Participates in interdisciplinary learning teams and/or subject matter or grade-level teams only.	Level 5 Participates in individual learning outside grade level, subject area, and/or school.	

Source: *Moving NSDC's Staff Development Standards Into Practice: Innovation Configurations, Volume I*, by Shirley Hord and Patricia Roy, 2003, Oxford, OH: NSDC. Copyright 2003 by NSDC.

Think Action

Components and variations in Innovation Configuration maps should begin with a verb. Here are some possibilities.

Analyzes	Contributes	Differentiates	Establishes	Identifies	Participates	Recognizes	Structures
Assesses	Creates	Discusses	Exhibits	Implements	Plans	Reviews	Uses
Attends	Describes	Engages	Experiments	Involves	Promotes	Rewards	Works
Collects	Develops	Ensures	Explains	Manages	Provides	Selects	

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.2, cont.

Six Steps to Create an IC Map

Copy page 140 for each member of the group creating the Innovation Configuration. Be prepared to write the components and variations on a large piece of chart paper or on a whiteboard that can be seen by all members of the group.

- 1 Visualize and brainstorm the components of the new program or practice.**
 Using the tool on page 140, have teachers identify the key components of the new program or practice. This is the hardest part of developing an IC.
 For example, if teachers were developing an IC for cooperative learning, the major components would be grouping patterns, tasks for students, individual accountability, group skills, interdependence, and group processing.
 Sometimes, the creator of a program has already identified the key components and teachers are able to begin working with those. For example, when teachers in the Chinle Unified School District #24 in northeastern Arizona wrote an IC for the 6+1 Trait Writing Program, they were able to build on components that had already been clearly identified for them by program developers.
- 2 For each component identified in Step #1, visualize and brainstorm the ideal behavior for the key individuals involved in the implementation.**
 For example, if grouping patterns is one of the components, the ideal might be having teachers assign all students to four-member groups. Write that in the first set of spaces under Variation.
- 3 For each component identified in Step #1, visualize and brainstorm the behavior for the key individuals involved in the implementation.**
 For example, in cooperative learning, not grouping students together would be the nonuse level. Write that in the last set of spaces under Variation.
- 4 Continue to generate variations for each component, essentially filling in the gap between the ideal behavior and the nonuse level.**
 Under grouping patterns for cooperative learning, for example, variations would include assigning students to three-member groups or assigning students to work with a single partner. Every component can have a different number of variations. This is one of the differences between an IC and a rubric.
 The number of variations will vary with each component. Write these variations in the remaining spaces, moving from most ideal use to nonuse.
- 5 Rewrite each variation, using an action verb to begin each sentence and describe the behavior of the key individual, such as the teacher or principal.**
 Assume that each sentence begins with the phrase, "The teacher..."
 For example, "the teacher assigns students to four-member groups."
 See the list of action verbs on page 138.
- 6 Using the tool on page 140, write the variations from left to right, with the most ideal variation on the far left and nonuse level on the far right.**
 Although every component will have a different number of variations, all of the components will have an ideal variation. Placing the ideal state in the far left column puts it in the most prominent place for the reader.



Implement, Evaluate, and Sustain Professional Learning

TOOL 7.2, cont.

Identify Components of an Innovation

Component 1	Variation:	Variation:	Variation:	Variation:
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Component 2	Variation:	Variation:	Variation:	Variation:
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Component 3	Variation:	Variation:	Variation:	Variation:
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Component 4	Variation:	Variation:	Variation:	Variation:
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Component 5	Variation:	Variation:	Variation:	Variation:
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.2, cont.

Map an Innovation Configuration

Directions: Using action verbs, describe each component and each variation. Place the ideal variation in the #1 position and the nonuse level variation in the #5 position. Place the other variations in between.

Component 1

1	2	3	4	5
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Component 2

1	2	3	4	5
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Component 3

1	2	3	4	5
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Component 4

1	2	3	4	5
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Component 5

1	2	3	4	5
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.2, cont.

Chinle School District writing Innovation Configuration map

Ideas & Content Component 3: Formally and informally assess for ideas and content.				
Highly Effective	Satisfactory	Needs Improvement	Unsatisfactory	Wrong Direction
<p>Consistently provides constructive feedback to students—<i>How can you clarify, support, focus, etc? Do you have the attention of the reader?</i></p> <p>Assists students in assessing using the 6 + 1 Traits™ of Writing rubric during several stages of the writing process. Rates students on the 6 + 1 Traits™ of Writing rubric and provides timely detailed feedback.</p>	<p>Consistently provides constructive feedback to students—<i>How can you clarify, support, focus, etc? Do you have the attention of the reader?</i></p> <p>Rates students on the 6 + 1 Traits™ of Writing rubric and provides detailed feedback.</p>	<p>Seldom provides constructive feedback to students—<i>How can you clarify, support, focus, etc? Do you have the attention of the reader?</i></p> <p>Rates students on the 6 + 1 Traits™ of Writing rubric.</p>	<p>Fails to provide feedback.</p> <p>Fails to use 6 + 1 Traits™ of Writing rubric when grading.</p>	<p>Provides negative feedback, which causes students to be afraid to expand ideas.</p> <p>Grades organization too heavily, with words like “off topic, delete, you don’t need this,” etc.)</p> <p>Teaches students it’s safer to say less.</p>
Organization Component 3: Formally and informally assess for organization.				
Highly Effective	Satisfactory	Needs Improvement	Unsatisfactory	Wrong Direction
<p>Provides a variety of assessments, rubrics, and workshops for scoring application of multiple literary forms.</p> <p>Provides time for self- and peer assessment of personal writing.</p> <p>Provides prompt and detailed verbal and written feedback to students using established rubric on organization.</p> <p>Provides one-on-one conferences.</p>	<p>Occasionally provides a rubric or other assessment to student with explanation.</p> <p>Periodically provides time for self- or peer assessment.</p> <p>Provides verbal and written feedback.</p>	<p>Seldom provides rubrics, time, or feedback to students.</p>	<p>Fails to provide rubrics, time or feedback—just gives a grade.</p>	<p>Throws away papers without reading them.</p>

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.3 Back to Implementing, Evaluating, and Sustaining Professional Learning Tools Chart

Example survey for 6 + 1 Traits™ of Writing

Level of Understanding and Degree of Implementation Survey

Name _____

Subject area/Grade level _____ Date _____

Note: Please rate statements according to where you are in the learning process when you take the survey. It is important to put your name so growth over time can be monitored when the survey is completed again.

Directions: Based on your current level of understanding and degree of implementation of 6 + 1 Traits™ of Writing, please circle the appropriate responses.

Level of Understanding and Degree of Implementation Survey	Level of Understanding					Degree of Implementation				
	Little/No			Extensive		Never			Frequently	
Use “trait vocabulary” appropriately and across the curriculum.										
1. Ideas	1	2	3	4	5	1	2	3	4	5
2. Organization	1	2	3	4	5	1	2	3	4	5
3. Voice	1	2	3	4	5	1	2	3	4	5
4. Word choice	1	2	3	4	5	1	2	3	4	5
5. Sentence fluency	1	2	3	4	5	1	2	3	4	5
6. Conventions	1	2	3	4	5	1	2	3	4	5
Connect the traits within the writing process.										
7. Writing from experiences	1	2	3	4	5	1	2	3	4	5
8. Pre-writing	1	2	3	4	5	1	2	3	4	5
9. Drafting	1	2	3	4	5	1	2	3	4	5
10. Sharing	1	2	3	4	5	1	2	3	4	5
11. Revising	1	2	3	4	5	1	2	3	4	5
12. Editing	1	2	3	4	5	1	2	3	4	5
13. Publishing	1	2	3	4	5	1	2	3	4	5
14. Assessing	1	2	3	4	5	1	2	3	4	5

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.3, cont.

Level of Understanding and Degree of Implementation Survey	Level of Understanding					Degree of Implementation				
	Little/No		Extensive			Never		Frequently		
Teach the 6 + 1 Traits™ of Writing through the writing process.										
15. Surround students with common writers' language (i.e. trait language).	1	2	3	4	5	1	2	3	4	5
16. Teach students to be assessors of their own and others' work and to use their self-assessment in revising and setting goals.	1	2	3	4	5	1	2	3	4	5
17. Use written works (including your own writing) to illustrate strengths and problems in writing.	1	2	3	4	5	1	2	3	4	5
18. Use focused lessons (including practice revisions) to help students develop skills in each trait.	1	2	3	4	5	1	2	3	4	5
Deal with common writing problems.										
19. Give students time for writing.	1	2	3	4	5	1	2	3	4	5
20. Ensure students have options sometimes to write on personally important topics.	1	2	3	4	5	1	2	3	4	5
21. Encourage pre-writing/rehearsing	1	2	3	4	5	1	2	3	4	5
22. Consider power of talking and drawing when, webbing, listing, or preliminary drafting challenges.	1	2	3	4	5	1	2	3	4	5
23. Model the solution to various writers' problems.	1	2	3	4	5	1	2	3	4	5
24. Encourage challenged writers to use strategies such as talking, working with a partner, asking (answering) questions, and dictating to achieve success.	1	2	3	4	5	1	2	3	4	5
25. Take students who know the traits to higher levels by assessing more difficult pieces, assessing and writing in various genres, creating their own genre-specific rubrics, designing their own lessons, or keeping portfolios with selected pieces showing strengths in various traits.	1	2	3	4	5	1	2	3	4	5

Please rate how you perceive your own effectiveness.					
	Minimum = 1			Maximum = 5	
1. Use the traits as a basis for your writing program.	1	2	3	4	5
2. Use the traits as an assessment tool to guide instruction so all student meet their writing goals.	1	2	3	4	5
3. Use the traits to support the revision and editing stages of the writing process.	1	2	3	4	5
4. Motivate students to become good writers.	1	2	3	4	5

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.4 Back to Implementing, Evaluating, and Sustaining Professional Learning Tools Chart

Collaborative professional learning team walk-through guide

Walk-through Checklist

Use this checklist as a reference when conducting monthly walk-throughs of collaborative professional learning team meetings. Place a check next to any behaviors noted. Add notes as reminders of what specifically you saw for future reference in reporting data.

Date: _____ Time: _____ Team: _____ Duration: _____

Check any behaviors evident. Make special notes as desired.

Notes: _____

Team/Individual Behaviors	Notes
Team Organization	
All members are present.	
The team facilitator has the agenda.	
Teams have their norms visible.	
Teams have their plan visible.	
Teams have their professional learning goals visible.	
Teams have their student learning goals visible.	
Team Engagement	
All members are actively engaged.	
Teams use positive communication strategies.	
The facilitator helps the team accomplish its work without being directive unless the work the team is doing requires it.	
Team members contribute equitably to the work.	
Team members treat one another with professional courtesy and respect.	
Team's Work	
Teams are focusing on an identifiable curricular area.	
Teams are focusing on instruction.	
Teams are focusing on data.	
Teams are focusing on assessments.	
Teams are focusing on meeting the needs of specific students.	
Teams refer to the curriculum.	
Teams consult external resources.	
Teams discuss the purpose of the meeting.	
Team members assess their team's work, their own learning, and student learning.	
Team members set an agenda for the next meeting.	
Team members complete the meeting summary.	

Implement, Evaluate, and Sustain Professional Learning

TOOL 7.4, cont.

Providing Feedback

General guidelines for giving feedback include:

- State what was observed rather than what was missing:
 - “Team members were looking at writing samples.”
 - “Only one team member spoke during my walk-through.”
- Pose questions for reflection or to probe further:
 - “How is the process of looking at writing different at this time of year from earlier/later in the year?”

Principals can give learning teams feedback from walk-throughs in multiple ways:

Cross-team data

Report on your collective observations of all teams rather than on observations of individual teams. For example:

- “Two teams were working on scoring common assessments.”
- “I observed about half of the members of each team participating during my walk-through.”
- “Most teams were working on lesson planning in literacy.”
- “Teams had evident facilitation.”

Reflection question: What decisions do teams need to make to ensure that they operate smoothly and have productive meetings?

Individual team data

Report data to one team at a time. For example:

- “Three members participated.”
- “The agenda was posted.”
- “Members asked questions of one another.”
- “The focus was the most recent math assessment.”

Reflection question: What might you do to strengthen your teamwork? What do you want to celebrate about your teamwork?

Individual data

Report data to individual members privately about their participation in the learning team. For example:

- “During my walk-through, you were working on something different than the other members.”
- “You encouraged others to add their thoughts.”

Reflection question: What behaviors do you want to strengthen to contribute to the team, and what do you feel good about as a member of the team?

Source: Adapted from *Becoming a Learning School* (“Collaborative professional learning team walk-through guide,” Tool 7.3 on supplemental CD), by Joellen Killion and Pat Roy, 2009. Copyright 2009 by NSDC. Adapted with permission.

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Resources

Transforming Professional Learning to Implement College- and Career-ready Standards and New Assessments

Professional learning is key to successful implementation of Common Core State Standards and forthcoming assessments for increased student achievement.

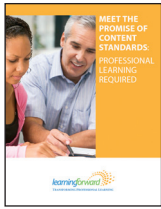
To meet the promise of new standards and assessments, state and district education leaders must transform professional learning to prepare and support teachers, teacher leaders, and school administrators for full implementation so that every student succeeds.

Now, leaders can apply lessons and tools from a multi-state demonstration project led by Learning Forward with support from Sandler Foundation, the Bill & Melinda Gates Foundation, and MetLife Foundation. Learning Forward collaborated with the Kentucky Department of Education in a seven-state professional learning research and demonstration initiative, *Transforming Professional Learning to Prepare College- and Career-ready Students: Implementing the Common Core*.

With the Council of Chief State School Officers, National Governors' Association, National Association of State Boards of Education, and American Association of Colleges of Teacher Education, Learning Forward designed these resources to improve professional learning policy and practice across the school system.

Use these resources to:

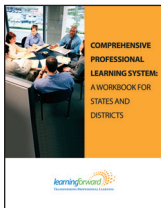
- refine policies to advance powerful visions for professional learning;
- plan, implement, and evaluate a comprehensive professional development infrastructure;
- align teacher and leader knowledge and skills with Common Core standards and assessments;
- leverage and account for professional learning resources and time; and
- design a coherent strategy for building relationships with external assistance providers.



Meet the Promise of Content Standards: Professional Learning Required

Explain the research and rationale for and the significant role of professional learning in implementing new standards, assessments and educator effectiveness systems, and describe what new kinds of professional learning look like in practice.

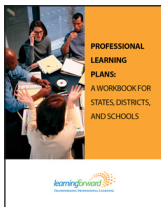
www.learningforward.org/docs/pdf/read-the-brief-%28pdf%29.pdf



Comprehensive Professional Learning System: A Workbook for States and Districts

Design a comprehensive professional learning system that supports educator effectiveness and increased student achievement.

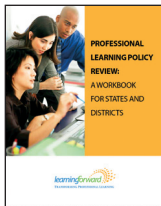
www.learningforward.org/docs/default-source/commoncore/comprehensive-professional-learning-system.pdf



Professional Learning Plans: A Workbook for States, Districts, and Schools

Develop short- and long-term professional learning plans to implement, evaluate, and sustain systems of professional learning.

www.learningforward.org/docs/default-source/commoncore/professional-learning-plans.pdf?sfvrsn=2



Professional Learning Policy Review: A Workbook for States and Districts

Conduct either a formal or informal analysis of existing policies (legislation, regulation, guidance, administrative guideline, etc.) related to professional learning.

www.learningforward.org/docs/commoncore/professionallearningpolicyreview.pdf



Meet the Promise of Content Standards: Investing in Professional Learning

Understand how to invest time, funding, technology, materials, and staff in professional learning.

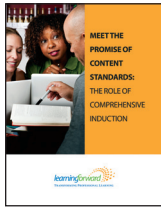
www.learningforward.org/docs/pdf/meetpromiseinvesting.pdf



Web Resources for Implementing Common Core Standards

Locate resources to support understanding and implementation of Common Core standards.

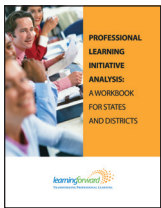
www.learningforward.org/publications/implementing-common-core/useful-websites



Meet the Promise of Content Standards: The Role of Comprehensive Induction

Improve mentoring and induction to develop capacity of novice teachers to share collective responsibility with their peers to increase student achievement.

www.learningforward.org/docs/default-source/commoncore/the-role-of-comprehensive-induction.pdf



Professional Learning Initiative Analysis: A Workbook for States and Districts

Conduct an inventory, review, and analysis of existing practices and investments in professional learning to improve efficiency and effectiveness.

www.learningforward.org/docs/default-source/commoncore/professional-learning-initiative-analysis.pdf



Meet the Promise of Content Standards: The Role of Third-Party Providers

Strengthen skills of state, district, and school administrators and leaders to develop productive relationships with third-party professional learning services providers in the state.

www.learningforward.org/docs/default-source/commoncore/the-role-of-third-party-providers.pdf



Meet the Promise of Content Standards: The Role of Technology for Teacher and Student Learning

Understand how teachers use technology to implement Common Core, increase their instructional effectiveness, and support student learning.

www.learningforward.org/docs/default-source/commoncore/the-role-of-technology-for-teacher-and-student-learning.pdf



Meet the Promise of Content Standards: Tapping Technology for Professional Learning

Guide district administrators, principals, teachers, and teacher leaders in the selection and use of technology within a system of professional learning. Access relevant content, refine instruction, and monitor continuous progress.

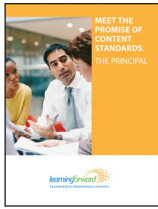
www.learningforward.org/docs/default-source/commoncore/tpltappingtechnology.pdf



Standards Assessment Inventory 2

Guide administrators and leaders to measure the quality of professional learning practices as defined by Standards for Professional Learning and make improvements. Additional resources only for SAI 2 users help refine professional learning after administering the inventory.

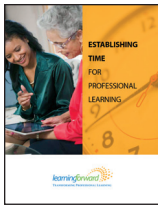
www.learningforward.org/standards/standards-assessment-inventory-sai



Meet the Promise of Content Standards: The Principal

Guide principals in implementing Common Core standards by ensuring they have support in key areas of school leadership.

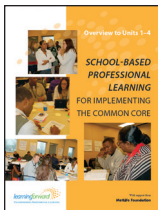
www.learningforward.org/docs/commoncore/meetpromiseprincipal.pdf



Establishing Time for Professional Learning

Redesign the school-day schedule to provide time for collaborative, job-embedded professional learning necessary to mobilize and sustain implementation of Common Core standards and assessments.

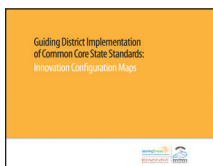
www.learningforward.org/docs/default-source/commoncore/establishing-time-for-professional-learning.pdf



School-based Professional Learning for Implementing the Common Core

Build the capacity of district and school administrators and teacher leaders to lead effective collaborative professional learning to implement Common Core standards.

www.learningforward.org/publications/implementing-common-core/professional-learning-units



Guiding District Implementation of Common Core State Standards: Innovation Configuration Maps

Assess and guide district leaders in their core responsibilities to support deep implementation of Common Core standards and educator effectiveness systems.

www.learningforward.org/docs/default-source/commoncore/kyccss_icmaps.pdf