TEACHER PROFESSIONAL DEVELOPMENT EVALUATION GUIDE

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and schools.

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Foreword

n behalf of the Maryland
Teacher Professional
Development Advisory
Council and educators from across
Maryland, I am pleased to share an
important part of our work around
teacher professional development with
colleagues in other states who share our
commitment to quality professional
development as an integral part of
professional practice.

We began in 2003, when Dr.
Nancy S. Grasmick, the Maryland State
Superintendent of Schools, created
the Maryland Teacher Professional
Development Advisory Council.
Recognizing the potential of high-quality
professional learning for all teachers as a
key to helping all students succeed, we
called on our 26 members to:

- Look carefully at teacher professional development policies and programs at the state and local levels;
- Set professional development

- standards as a way of articulating a Maryland-specific, policyrelevant definition of high-quality professional development; and
- Offer recommendations for ongoing improvements in professional development programs and policies to ensure that they meet the new standards.

After reviewing the advisory council's initial reports and sharing them with the Maryland State Board of Education, Dr. Grasmick affirmed the council's ongoing work and refined her original charge. In December 2006, she asked us to look at state and local efforts to apply our new standards in creating a statewide system of high-quality professional development and to identify challenges associated with implementing the standards.

As part of its review of challenges associated with applying the new professional development standards, the council examined the state of the

¹ Beginning with its 2004 report, *Helping Teachers Help All Students: The Imperative for High-Quality Professional Development,* the advisory council produced four reports. These reports, as well as a number of other professional development products, are available at the Maryland State Department of Education web site: www.marylandpublicschools.org/MSDE/divisions/instruction/prof_standards.

art of evaluating teacher professional development in Maryland. The council reviewed evaluation activities at both our state Department of Education (MSDE) and in our 24 local school districts and offered the following assessment in its 2008 report to Dr. Grasmick and the State Board of Education:

"Overall, the council concludes that the increase in state and local efforts to evaluate teacher professional development, combined with increased awareness of the need for more rigorous evaluations, set the stage for significant progress in the future. The council recognizes that ongoing review of teachers' perceptions of their professional learning experiences, both in terms of how these experiences are organized and the perceived likelihood that they will result in changed in teaching and learning, are important. At the same time, the council concludes that the districts, MSDE, and other stakeholders need to work together to improve both the scope and quality of their evaluation efforts. In particular, future evaluation efforts should focus on careful examination of the effect of professional development on observable and measurable changes in teacher knowledge and skills and classroom practice. These evaluations should also focus on linking specific changes in practice to changes in student learning. The council notes that

the planning framework in the Maryland Teacher Professional Development Planning Guide is a useful tool for designing rigorous evaluations. The Council also notes that the forthcoming guide for evaluating teacher professional development, which will complement the planning guide, will also be a useful tool for designing rigorous evaluations.

"In urging improvements in evaluating teacher professional development, the council is acutely aware that there are few good models elsewhere in the country to guide improvements in Maryland. At the same time, heightened demands for accountability and solid evidence of reasonable returns on investments make it imperative to improve evaluations of teacher professional development."

As the council noted in this report, a consortium of several districts and MSDE worked with Bruce Haslam to develop the initial version of the Maryland Teacher Professional Development Evaluation Guide. Our evaluation guide was intended to complement the Maryland Teacher Professional Development Planning Guide as a tool to inform planning and evaluations of local and state professional development programs and initiatives in Maryland.

We were very pleased when the National Staff Development Council (NSDC) learned of the work under way in Maryland and commissioned revisions to the Maryland evaluation guide to ensure its usefulness in other states and districts.

The new guide is intensely practical. It emphasizes the idea that evaluations of professional development should reflect the professional development design as envisioned by facilitators and designers.

The guide urges evaluation planners and those responsible for conducting the evaluation to use the guide to inform evaluation design and to make choices among design options and data collection strategies that will add rigor while, at the same time, recognizing limits in capacity and resources.

It recognizes that evaluation planning is an important part of overall planning for professional development and should begin early in the process. In addition, the guide urges evaluation planners and those responsible for conducting the evaluation to use the guide to inform evaluation design and to make choices among design options and data collection

strategies that will add rigor while, at the same time, recognizing limits in capacity and resources. Finally, the guide consistently underscores how evaluation can contribute to improving the quality of teacher professional development by informing providers and others about what is going well and where midcourse corrections are needed to increase participation and improve outcomes in the kinds of long-term professional development that hold so much potential for strengthening practice. The results of rigorous evaluations can also inform choices about future investments in professional development and decisions about continuing and perhaps expanding it. Finally, the guide provides a useful framework for local and state professional development providers, facilitators, and program managers to have conversations with evaluation specialists and consultants who may be hired to assist in the process.

Based on our early experience in Maryland, we have found the evaluation guide to be a useful tool. At the same time, we are learning that time and resource constraints, as well as lack of evaluation experience among potential users, may limit the extent to which the guide is actually used in the field. For this reason, I encourage state departments of education and school districts to support individuals who are expected to use the

guide. Support can include seminars to introduce the guide and its key concepts, ongoing technical assistance during planning, and critical friend reviews of evaluation plans and evaluation reports. In addition to these and other kinds of training and technical assistance, state departments and school districts can bolster professional development grant programs and other initiatives to support professional development and school improvement by requiring rigorous evaluations accompanied by an iterative review process. This multistep process includes "no-fault" reviews and feedback in the early phases of the grant application/approval process. Balancing requirements with no-fault feedback that can be incorporated into requests for proposals and various planning district and school planning processes should require evaluation plans and designs that

explicitly reflect attention to the main principles emphasized in this guide. Initial cycles of planning and review will almost certainly require guidance and support, as well as thoughtful feedback. Our experience in Maryland, however, has shown a good return on these investments of people, time, and money.

All of us in Maryland who have participated in the early development of the guide are pleased to share it with colleagues around the country. We hope that you will find the guide useful and that you will share your experiences with us and with others in NSDC's national and state networks and meetings, and in other forums.

Colleen P. Seremet Assistant state superintendent for instruction Maryland State Department of Education January 2010

Introduction

"Evaluating professional development enables program managers and participants to make data-based decisions about the program. If the evaluation is done well, everyone benefits. If done poorly, it will be a waste of resources. The most useful evaluations result from a desire to improve both the program and its results…" (p. 140).

Joellen Killion, Assessing Impact: Evaluating Staff Development, 2nd edition, 2008

¬ ach year, thousands of teachers across the country participate in a **d** range of professional development that reflects substantial investments of time and money. Yet despite widespread reliance on professional learning as a core component of efforts to improve education for all children, educators have little systematic information to allow us to assess the quality of professional learning or to gauge their contributions to professional practice and student learning. In short, there is little information on the return on the investment and little information to use to persuade decision makers that the investment should be continued or even increased.

How evaluations can promote understanding of teacher professional development

Rigorous, ongoing evaluations can

promote understanding in several ways.

- Early or formative evaluations gauge teacher satisfaction with professional learning and help determine whether the professional learning took place as planned, whether teachers mastered new knowledge and skills, and whether teachers applied the new knowledge and skills in their classrooms.
- Formative evaluations help
 professional development
 participants, facilitators, providers,
 and sponsors determine whether
 the professional learning is on track
 or whether midcourse changes
 are necessary to achieve intended
 outcomes.
- Final or summative evaluations
 help stakeholders understand
 whether the professional
 development achieved the intended

- outcomes as these outcomes are reflected in changes in teachers' professional practice and increased student learning.
- Ongoing evaluations may yield information about changes in school organization and culture that result from teacher participation in the professional development being evaluated.

This guide is intended to help staff in school district central offices, schools, state departments of education, and faculty and staff in institutions of higher education work with other professional development providers and consultants to plan, conduct, and report on evaluations of teacher professional development. Experience suggests the guide also can inform conversations about the evaluation process as district professional development staff, professional development providers, and others work with external evaluators to plan evaluations.

Guiding assumptions about evaluating teacher professional development

The guide rests on four assumptions about planning and conducting evaluations of teacher professional development.

No single "best" approach to evaluation exists, although the suggestions presented here apply to a broad range of professional development. Evaluations should be tailored to the professional development being evaluated. Evaluation questions, data collection strategies, and reporting will vary depending on the nature of the activity and the evaluation's purpose. Just as high-quality professional development is a process that extends over time, successful evaluations of professional development focus on all phases of the process. In addition, the availability of resources (money, people, and time) that can be allocated to the evaluation will influence what can be accomplished. Decisions about the evaluation's design and scope should be realistic

Evaluation planning should be an integral part of professional development planning. Those responsible for evaluation should be on professional development planning teams from the beginning. Planning teams should think about evaluation as they: 1) identify the need for the professional development; 2) identify the intended participants; 3) specify the intended professional learning outcomes and related indicators and the expected outcomes in student

and practical.

learning and related indicators; and 4) decide what kind of professional learning is most likely to result in the intended outcomes. Without clear decisions in each of these areas, it is difficult to plan rigorous evaluations. Moreover, evaluations not planned

Just as they contribute to plans for professional development, teachers can be involved in planning the evaluation by helping to sharpen the evaluation questions, collecting and analyzing data, and reporting on evaluation results and making recommendations based on those results.

- in advance seldom yield useful information and results and are therefore a waste of time and money.
- Teachers have key roles to play in evaluating professional development. A core element in NSDC's definition of high-quality professional development is that teachers should be actively engaged in planning and leading their own professional learning. This role can be

- expanded to include involvement in evaluating professional development. Just as they contribute to plans for professional development, teachers can be involved in planning the evaluation by helping to sharpen the evaluation questions, collecting and analyzing data, and reporting on evaluation results and making recommendations based on those results. Involving teachers in these and other ways complements and extends their professional learning by increasing opportunities for reflection, professional discourse, and collaboration with colleagues. Being involved also adds a dimension of teacher leadership and professional responsibility.
- Evaluations of teacher professional development should be separate and distinct from teacher performance appraisals. Evaluation teams should establish safeguards to ensure that data collection and reporting evaluation results do not overlap with teacher performance appraisals. The safeguards should be clearly visible to teachers and others involved in the professional development and evaluations.

What's in the guide?

The guide offers practical suggestions for planning and conducting evaluations

of teacher professional development. It begins by posing a series of questions for planning teams to consider as they start working on an evaluation design and plans for conducting the evaluation. The second section discusses various approaches to evaluation design and options for data collection. The third section discusses the importance of monitoring the quality of evaluation data as they are collected, as well as strategies for data analysis. The last section offers advice on preparing evaluation reports. The guide also includes two appendices. Appendix A is an annotated bibliography of evaluation resources, including data collection instruments. Appendix B includes sample items for surveys of teacher perceptions of their professional learning experiences.

Five questions to inform evaluation planning

any factors influence plans for evaluating teacher professional development. This section of the guide poses five questions about various factors planners need to consider in designing an evaluation. Because the answers to these questions will define the basic parameters of the evaluation, the evaluation team should come to consensus about them before moving forward. Failing to address these questions in advance invariably results in superficial and incomplete data collection and analyses and missed opportunities to identify ways to make improvements and learn about the payoffs of teacher professional development. Similarly, retrofitting an evaluation plan and data collection on professional development that is well under way, or even complete, limits data collection opportunities and generally makes it difficult to tailor the evaluation to the professional development in meaningful ways.

Answer the five questions posed here and look ahead to other elements of the plan discussed in the next section. Use

the checklist at the end of this section to be sure the plan is complete.

1. Should the activity be evaluated?

Because evaluations require time and money, consider whether it makes sense to evaluate a particular professional development program or initiative. In some cases, the decision will be based on whether funders, policy makers, or federal and state regulations require an evaluation as a condition of providing support. Ideally, these kinds of professional development should be evaluated, because the evaluation results can provide important information to key stakeholders, including the participants:

- Large-scale professional development (that includes large numbers of teachers, extends over relatively long periods of time, and/or represents significant investments of professional development resources);
- Professional development that is a key component of state, district, or school improvement initiatives, such as learning supported as part

- of state and local strategies to address the four education reform assurances included as priorities under the American Recovery and Reinvestment Act (ARRA)²; and
- Pilot professional development that is likely to be taken to scale if the initial evaluation results are positive or suggest a clear path for strengthening the learning.

Evaluations of other kinds of professional development are likely to have limited payoffs in terms of understanding what works and what doesn't work. It makes little sense to invest in evaluating:

- One-time or short-term professional development with few participants and no prospects for scale-up;
- Professional development for which there is very limited or unclear expectations for teacher outcomes; or
- Professional development that is not clearly and explicitly aligned with state, district, or school priorities. Districts and professional

development providers that have developed standardized participant satisfaction instruments and data systems that can store large numbers of responses may use satisfaction measures for an ongoing look at satisfaction and ratings of usefulness to inform the planning of future professional development. Absent other complementary data collection, these results are, however, almost always cursory and of very limited use in gauging impact and effectiveness.

In most cases, the decision about whether to conduct an evaluation will be fairly easy. Nevertheless, given the cost and time necessary to conduct rigorous evaluations, planning teams should think carefully about whether to proceed. They should also consider the following advice from Hayes Mizell (2009) as he lamented the absence of a rigorous evaluation of an important professional development initiative:

"Don't conceive and implement a new initiative without creating, on the front end, a sound process for documenting and reporting how the project unfolds and what it achieves. Don't ignore the challenges of determining what data you will need

These assurances include: improving educator effectiveness and equitable distribution; developing a statewide longitudinal data system; adopting rigorous standards and assessments; and turning around low-performing schools. A recent survey of state policy makers found that many states are including teacher professional development as part of their strategies to address the four assurances. For more information, see An Early Look at the Economic Stimulus Package and the Public Schools (Center on Education Policy, 2009). It is also likely that teacher professional development will figure prominently in state applications and for ARRA Race to the Top funds and other ARRA funds.

to collect, the availability of the data, who will be responsible for collecting the data at what intervals, and who will analyze and use the data to prepare a written narrative describing the progress, problems, and outcomes of the initiative $(p. 8).^3$

2. What are the key elements of the professional development that will be evaluated, and what assumptions hold these elements together?

Quality evaluations are tailored to the professional development being evaluated. An important step in the planning process is to understand the overall design of the professional

Each professional development program or initiative requires a unique logic model.

> development. What are its goals and objectives? Who are the expected participants? What kind of professional learning will take place, and on what timeline? What resources are necessary to ensure that the professional development takes place as planned and yields the intended outcomes? What contextual

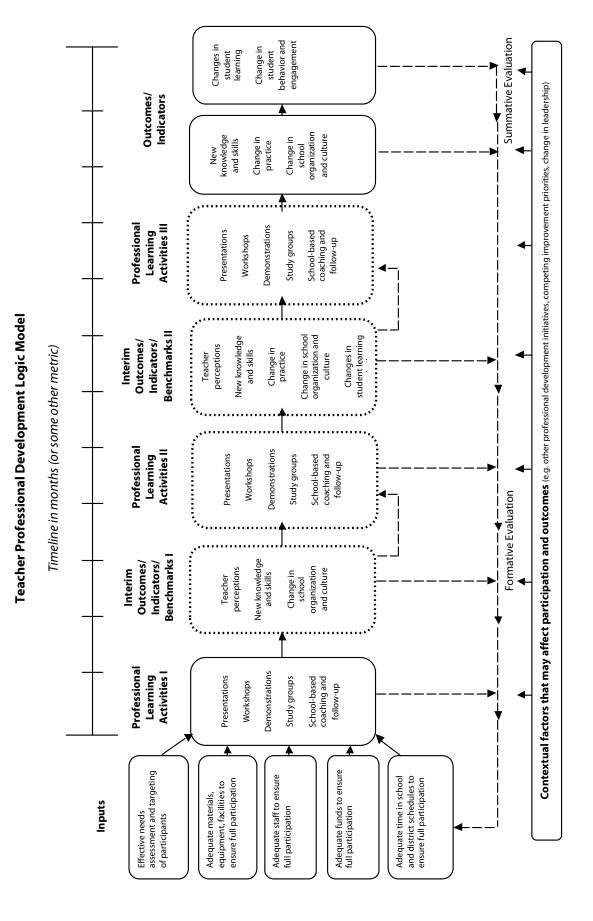
factors are likely to influence the professional development, and how are these factors likely to influence the extent to which teachers apply new knowledge and skills in their classrooms?

If the professional development planning team has not already addressed these issues, the evaluation planners should encourage the group to do so. One good way to address these questions and to gain consensus about the answers is to develop a logic model to help identify key components of the professional development, the underlying assumptions, the timeline, and the expected outcomes. Creating a logic model is especially helpful in planning long-term professional development that includes several kinds of professional learning. Creating a logic model is equally helpful in planning an evaluation. The logic model becomes the road map for the evaluation.

The figure on page 15 illustrates what a professional development logic model might look like. Each professional development program or initiative requires a unique logic model.

The boxes on the left side of the logic model list the inputs necessary for teacher professional development. Evaluation planners should also recognize

See: Making a Path, Leaving a Trail, remarks of Hayes Mizell on December 5, 2009, at the annual meeting of 12 Under 12, a national network of seven public schools. Available at www. thescsdc.org/120509.pdf.



that identifying teacher learning needs and who will participate in the professional development will go a long way toward determining baselines against which to gauge improvements in teacher knowledge, skills, and practice and changed student outcomes. Identifying all of the inputs in the logic model is important, but carefully identifying teacher learning needs is especially important. Too often, professional development planners explicitly or implicitly assume that all teachers have essentially the same learning needs. Professional development that rests on this assumption tends to reflect a onesize-fits-all model, which often means that the professional development doesn't actually fit anyone's needs very well.

The three boxes labeled **Professional** Learning Activities I, II, and III indicate that professional learning may be ongoing and extend over a number of months or even several years. The activities included in each of these boxes may differ as the professional development unfolds, or some may be repeated several times. Note that the logic models for some professional development programs or initiatives may require only one of the learning activity boxes. Other initiatives may require several boxes for an adequate description.

The boxes labeled **Interim** Outcomes/Indicators/Benchmarks I and II and Outcomes/Indicators can include the various outcomes, indicators, and benchmarks that planners expect to observe and/or measure at different times as the professional development continues. For example, the first set of interim outcomes could include participants' perceptions of the usefulness of the professional development, initial mastery of new knowledge and skills, and changes in school organization to accommodate later classroom applications of new knowledge and skills. As the professional learning progresses, the second set of interim outcomes could include more extensive mastery and application of new knowledge and skills and an early look at whether changes in student learning are occurring as expected. The last set of boxes on the right side of the model depicts what changes are expected in professional practice as a result of the activity and what improvements in student learning are expected to result from the changes in teacher practice.

As a general rule, begin by thinking about the final outcomes and related indicators depicted by the boxes on the right side of the logic model, especially when planning longer-term professional development. Put simply, ask two questions: What are we trying to accomplish? How will we know when we have accomplished it? After

answering these questions, figure out what interim outcomes and indicators will provide evidence that the activity is on track to accomplish the longer-term outcomes. Note that only after specifying the outcomes can planners reasonably determine the kinds of professional learning necessary to achieve the intended outcomes.

Several criteria should guide the selection of both the interim and final outcomes and indicators. First, criteria should be reasonable and not overly ambitious. In addition, although the ultimate goal of teacher professional development is to improve student learning, the more immediate goal (as reflected in the outcomes and indicators) is improved teacher knowledge, skills, and practice.

Several fundamental reasons make it difficult to empirically establish clear causal relationships between teacher participation in professional development and changes in student learning, especially as these changes are measured by standardized assessments. First, only the most ambitious, longterm professional development aims to improve teacher knowledge and skills across the entire scope of content covered by these assessments. Second, many factors affect student learning in all of the areas covered by the assessments besides their performance as test takers. Most

evaluations will not be able to control for these factors.

For these reasons, professional development planners and evaluators should concentrate on outcomes for teachers and proximal learning outcomes for students, with the latter reflected in indicators such as student work samples and results on locally developed benchmark assessments and/or end-ofcourse assessments. When the prompts

Although the ultimate goal of teacher professional development is to improve student learning, the more immediate goal (as reflected in the outcomes and indicators) is improved teacher knowledge, skills, and practice.

that generate work samples and local assessments are tightly aligned with state assessments or other standardized assessments, student learning outcomes observed on these indicators can also be predictors of improved results on standardized assessments, or at least portions of them.

The timeline across the top of the logic model not only describes the professional development schedule, it also helps determine the evaluation

schedule. The broken lines across the bottom of the logic model suggest that results from early or formative stages of the evaluation can be used to modify the professional development design. The results also can be used to report early outcomes to interested stakeholders. The final or summative phase of the evaluation is completed after the learning has taken place at a point when expected outcomes and related indicators might be observed.

The box at the bottom of the logic model hypothesizes that there are many contextual factors that influence professional development and its outcomes, including outcomes related to the application of new professional knowledge and skills and to changes in student learning. Planners may not be able to identify all of the relevant contextual factors or predict their influence. Nevertheless, trying to identify them may help avoid problems as the professional development unfolds.

The importance of developing and coming to consensus on a logic model to guide professional development and the evaluation is difficult to overstate. Developing a logic model compels planners to critically examine their assumptions about how various kinds of professional learning will contribute to changes in practice and student learning and ensure that the professional development explicitly reflects these assumptions. And, as already noted, developing a logic model creates a road map for an evaluation.

3. Who is likely to be interested in the evaluation, and what do they want to know about the professional development?

Consider potential audiences and their interests.

- Teachers will want to see their reflections and feedback on the professional development and its benefits, as well as those of their colleagues, captured in the evaluation results.
- District professional development staff, especially professional development coordinators, school-based professional development staff, supervisors, and curriculum coordinators, will want to know whether the professional learning took place as planned, including whether they attracted the intended participants. They will also want to know what participants thought about the professional development as a possible indicator of whether the participants will apply the new knowledge and skills and what midcourse changes may be required. Later, they will want to know whether the professional development achieved the intended

- outcomes and perhaps whether the evaluation suggests payoffs in continuing the activity or taking it to scale. They will also want to know what lessons can inform plans for future learning.
- Principals and other school leaders will want to know whether the professional development produced the intended changes in teachers' knowledge and skills and whether and when these changes are likely to result in positive changes in student outcomes. Like district professional development staff, principals will also want to know about the lessons they can learn for planning and facilitating future professional development in their schools.
- Providers, including college and university faculty, consultants, and vendors, will want to know what participants thought of the professional development and whether the professional development achieved the intended results.
- Funders and program managers will want to know the evaluation results, either to satisfy their own reporting requirements or to inform decisions about additional or follow-up funding.
- District leaders, including school board members, will join other stakeholders

in wanting to know whether the professional development achieved the intended changes in teachers' knowledge and skills and, consequently, led to positive changes in student learning. They might also want to know how these results stack up against the results from other professional development.

District leaders and policy makers are also likely to want to know about cost, especially if the evaluation findings suggest continuing or expanding the activity. Examining professional development spending is outside the scope of the evaluations described in this guide. Evaluators can, however, examine the budget prepared as part of the planning process. The evaluation might also ask whether funds were spent according to the plan and, if not, how the spending varied from the plan and why.

Parent and community groups will want to know whether and how the professional development contributed to changes in instruction and student learning outcomes, especially when the professional development required a substantial investment of district resources and/ or required teachers to be out of their classrooms and away from students for extended periods.

Learn what key stakeholders would like to know or need to know about the professional development and when they would like to have or need to have the information; however, the evaluation may not address all stakeholder questions. Planners may need to reach a compromise about the evaluation's focus

Recognize and acknowledge that evaluating professional development is an unfamiliar task for many educators. Some capacity building and training will almost certainly be necessary. Identify staff willing and able to be involved in this part of the work.

> and scope if information needs exceed what is possible given the resources and staff available for the evaluation.

4. What resources are available to support the evaluation?

Because resources to support evaluations are often limited, know in advance what support is available and plan accordingly. Recognize that resource constraints may make it difficult, if not impossible, to address all of the information needs and questions various

stakeholders pose. Pointing out to stakeholders that resource constraints will make it difficult to answer at least some of their questions could be a strategic lever to garner additional resources. A commitment to address key stakeholder questions about the professional development's effectiveness and impact may be a way to ensure that necessary resources for the evaluation are available.

Ideally, the professional development plan will include a description of the evaluation and the estimated budget, including in-kind costs such as staff time.

5. Who will work on the evaluation?

Knowing who will work on the evaluation is a critical part of the resource issue. Decide who will be responsible for overseeing or managing the evaluation and who else will work on the evaluation (e.g. develop data collection instruments, collect and analyze data, prepare reports). Also think about whether and how participants (teachers, in this case) and other school and district staff might be involved. (Options for teacher involvement in evaluations of professional development are discussed in more detail later in the guide.)

Evaluation work should begin soon after the professional development gets under way, so have staff ready to work on the evaluation as early as possible. Additional staff may be needed as the

process proceeds. If additional staff are not available, adjust the evaluation plan accordingly.

Recognize and acknowledge that evaluating professional development is an unfamiliar task for many educators. Some capacity building and training will almost certainly be necessary. Identify staff willing and able to be involved in this part of the work.

When determining staff requirements for the evaluation, also decide whether to seek help from an evaluator or evaluation consultant. These individuals can contribute to discussions about professional development outcomes and indicators and can suggest approaches for collecting and analyzing data. Skilled evaluators and data analysts can help with more complicated design and analytic tasks, especially choosing samples of participants to include in data collection, linking participation in professional development to changes in student learning outcomes over time, analyzing large amounts of quantitative data, and experimental and quasiexperimental evaluation designs.

Good sources of evaluation expertise are district research and accountability office staff and college and university faculty, as well as evaluation firms and contractors.

Cost can be a concern when hiring an external evaluator. When considering these costs, keep in mind that working with an external evaluator can have several advantages. An external evaluator can add objectivity and credibility. An external evaluator also can make the evaluation process more efficient, reducing overall cost while significantly improving technical quality.

Working with an evaluator means that evaluation planners and professional

An external evaluator can add objectivity and credibility as well as make the evaluation process more efficient.

development planners become more like users or consumers of the evaluation rather than those actually doing the evaluation. They are the evaluator's clients. Being a good client means working hard to be sure that evaluators have the information that they need and being as clear as possible about the evaluation's purpose. Conversely, being a good evaluator means listening carefully to clients and asking questions.

Summary

Ideally, planning an evaluation of a professional development program or initiative will get under way as the

activity itself is being planned. Evaluation planning, like professional development planning, is an iterative process, with the evaluation plan evolving as the professional development plan evolves. The five questions posed in this section address practical considerations for planning a successful evaluation. Answering these questions helps to define what should be done in an evaluation and what's possible. The first step is to determine whether an activity should be evaluated. Does the basic plan for the activity hold some promise for the activity resulting in important outcomes? Will a solid evaluation yield results that will help inform subsequent phases of the activity and plans for new professional learning?

The second step is to identify the activity's key components (e.g. needed inputs, professional learning, and anticipated outcomes and indicators) and the assumptions that hold these elements together conceptually. A logic model or some other schematic representation can help describe the elements of the activity and provide the evaluation framework. Anticipating possible audiences, including their needs and interests, helps sharpen the evaluation's scope and focus. Knowing what evaluation resources are necessary and available guides choices about the evaluation's scope and will almost certainly set some constraints on what can be accomplished.

Finally, a viable evaluation plan will clearly identify staff who will work on the evaluation, their roles, and the kinds of training and support they will need to complete their assigned tasks.

The following checklist can serve as a reminder about the key components of a good evaluation plan and help planners keep track of which components are in place and which are not.

Checklist for teacher professional development evaluation plans

The plan includes a logic model clearly indicating:		Dia	Did the professional development achieve the intended		
	Key inputs necessary for the professional		outcomes specified in the plans for the activity and as		
	development to succeed.	refl	ected by measurable and/or observable indicators?		
	Professional learning necessary to achieve		The plan explicitly describes appropriate		
	intended interim outcomes and intended final		data sources (e.g. reports from systematic		
	outcomes for teachers.		observations and/or similar activities, local		
	Measurable and/or observable professional		and state assessment results and student work		
	learning outcomes for teachers and, as		samples for students of teachers participating		
	appropriate, learning outcomes for students.		in the professional development) for each of		
	A timeline for completing key professional		the indicators, appropriate data collection		
	learning and attaining interim and final outcomes		procedures, and a reasonable timeline for		
	for teachers and, as appropriate, students.		addressing this question.		
The evaluation plan clearly describes how the		Org	ganization and staffing		
evaluation will address each of the following		The	e plan clearly indicates who will be responsible for:		
qu	estions about the professional development		Developing appropriate data collection		
activity.			instruments (if necessary).		
Dia	the activity take place as planned?		Collecting data to address each evaluation		
	The activity included the intended participants.		question.		
	All of the participants engaged in all of the		Data analysis.		
	professional learning.		Reporting.		
	All of the professional learning took place as				
	planned.		The plan includes an overall time for evaluation and		
	All of the necessary materials, personnel, and	spe	ecifies reasonable completion dates for:		
	equipment were available.		Selecting and/or developing appropriate data		
	The plan explicitly describes data collection		collection instruments.		
	activities, including specifying appropriate		Each of the data collection activities included in		
	instruments and a reasonable timeline for data		the plan.		
	collection, for addressing each of the parts of this		Data analysis.		
	question.		Reporting.		
What were the participants' perceptions of the relevance		The	e plan includes budget estimates, specifying direct		
and	d usefulness of the professional development?	cos	ets and in-kind contributions for:		
	The plan explicitly describes data collection		Salaries/stipends for the evaluators.		
	activities, including appropriate instruments and a		Supplies and materials.		
	reasonable timeline, for addressing this question.		Communications.		

Evaluation design and data collection strategies

ffective evaluations are explicitly tailored to the professional development being evaluated. As professional development planning progresses, planners identify questions that the evaluation will answer and how best to answer them. This section of the guide begins with suggestions for how evaluations can address three basic questions about professional development programs and initiatives. Next, the guide discusses two design options that can add rigor to an evaluation: focusing on a sample of participants versus all of the participants and adding a comparative dimension. This section also explains how to prepare for data collection, and it ends with a discussion of options and opportunities for involving teachers in collecting data on professional development outcomes and indicators.

Evaluation questions

Comprehensive evaluations of teacher professional development should focus on three basic questions:

Did the professional development

- take place as planned?
- What were teachers' perceptions of the professional development?
- Did the professional development achieve the intended outcomes?

In deciding whether and how to address each of these questions, carefully review the professional development plan and the logic model to determine what the evaluation should focus on and what kinds of data to collect. If the professional development plan and the logic model are unclear or inconsistent about the inputs and resource needs, professional learning, and/or expected outcomes and indicators, clear up any ambiguities with the professional development planning team. A conversation with the professional development planning team may, in turn, lead to modifications in the evaluation plan, including a clearer definition of the expected outcomes.

Looking at professional development implementation⁴

Examining implementation of the planned professional development,

including identifying any problems and impediments to implementing the professional development as planned, can inform decisions about future professional development as well as decisions about necessary modifications or midcourse corrections to the professional development being evaluated. Specifically, in looking at implementation of the professional development, evaluators should collect data on:

- Individual teacher participation to determine whether teachers who were targeted to participate actually did participate and whether they participated in all of the key professional learning specified in the professional development plan and/ or logic model;
- The availability of the supplies, materials, and equipment necessary to improve or implement new professional practices, as specified in the professional development plan and/ or logic model;
- Whether the professional learning occurred at the intended levels

- of frequency and duration and included the content specified in the professional development plan and/ or logic model;
- The extent to which all of the key players (e.g. presenters, facilitators, school-based professional development staff, principals) carried out their responsibilities as specified in the professional development plan and/or logic model;
- The extent to which contextual factors (e.g. changes in school or district leadership, changes in school or district priorities, changes in resources, changes in teacher assignments, changes in student characteristics) influenced implementation, including teacher participation.

Collecting data on the implementation of professional development is relatively straightforward but does require careful record keeping that, in turn, requires reliable procedures to collect and store the data necessary to track implementation. These data might include sign-in sheets to track teacher

Readers should note that this guide uses the term "implementation" in two ways. First, implementation, as in implementation of the professional development, refers to the extent to which the professional development took place, or was implemented, as planned. Second, the term also refers to the application of new knowledge, skills, and practices that may be the result or outcome of participation in the professional development. Examining implementation of the professional development and the early outcomes is sometimes referred to as formative evaluation or process evaluation. Gauging participants' reactions to and perspectives on the evaluation, which is discussed later in the guide, is often included in formative evaluations.

participation in centralized activities and activity logs maintained by school-based professional development staff to track follow-up support for individual teachers and groups of teachers. Using electronic files and online systems to maintain activity logs and similar records is very efficient and inexpensive, especially with well-designed reporting forms. Once these record-keeping systems are in place, it is easy to update the information in them.

Although almost certainly not a central focus of data collection on implementation, changes in school and district contexts are likely to affect whether the professional development took place as planned. For example, a change in a district's priorities for instructional improvement could significantly affect teacher participation, especially if the change is somehow incongruent with the focus and goals of the professional development being evaluated. For example, a new reading program is introduced that calls for different instructional strategies than those being emphasized in the professional development or a new mathematics curriculum is not compatible with the professional development content. Similarly, unanticipated reductions in funding for substitute teachers could lower teacher participation rates. Reductions

in funds also could result in shortages of instructional materials and equipment needed to implement new practices and programs. If such changes occur, document the changes and learn as much as possible about how they affect the implementation and outcomes of the professional development.

What are the consequences of not carefully examining implementation of the professional development? If there are no data — or are very limited data on implementation, evaluators will be unable to determine whether the professional development took place as planned and what factors contributed to or impeded implementation. Evaluators then will be at a loss to pinpoint problems that might be addressed through midcourse corrections in the professional development design and plans. Lack of examination can be especially serious in evaluations of long-term, multiphase professional development. A second serious concern is that without data on implementation, evaluators will be hard-pressed to attribute any observed changes in teacher knowledge, skills, and professional practice to professional development. This problem is particularly severe when there are gaps in the data on teacher participation in comprehensive, longterm professional development.

Examining participant perceptions of the professional development

Examining what participants thought of the professional development can yield an early indicator of whether and how participants are likely to apply new knowledge and skills in their professional practice. Participant perceptions can also yield useful information on whether the professional development was implemented as planned and can help pinpoint components of the professional development that went well and those that may require modification.

The easiest and most efficient way to collect data on participants' perceptions of professional development is through one or more surveys. (Appendix B includes sample items that evaluators can tailor for surveys of teacher perceptions of their professional development experiences.) Depending on the nature of the activity and the reasons for examining participant perceptions, surveys can address some or all of these topics:

- Participants' understanding of the purpose of the professional development5;
- Ratings of the usefulness or relevance of key components of the professional development to

- current assignments/responsibilities, with special attention to teachers' perceptions of its usefulness in working with their own students;
- Perceptions of the extent to which professional development met individual professional learning needs;
- Ratings of how well the content or focus of the professional development aligned with district or school improvement priorities, plans, and goals;
- Perceptions of the kinds of support and encouragement teachers received to actively engage in the professional development;
- Perceptions of the kinds of support and encouragement they received to apply new knowledge and skills in their classrooms;
- Ratings of the likelihood of applying new knowledge and skills in the classroom; and
- Overall ratings of the usefulness of the professional development compared with that of other professional development.

If the survey is about a session or series of sessions with multiple components and/or that extend over a relatively long period of time, the survey

Surveys often ask participants to rate the clarity of the purpose of the activity. Although these ratings are important elements in overall ratings of quality, they do not address the issue of whether participants actually understand what the purposes are.

should include items about participation in each component of the activity to help determine overall participation patterns and whether they appear to be related to attaining the intended outcomes. Alternatively, an evaluation could include several surveys, with each one focusing on a key component of the professional development (e.g. initial workshops and presentations, school-based follow-up, opportunities for reflection and practice).

Whenever feasible, surveys should be administered three to six weeks after the professional development is completed, instead of the standard end-of-thesession-on-the-way-to-the-parking-lot approach to survey administration used in many local evaluations. Administering the survey some weeks after the event gives participants time to reflect on the professional development and how they benefited from it and makes it possible to ask questions about follow-up professional development and support, which are key elements in high-quality professional development.

Also consider administering surveys online. Online surveys are inexpensive, and available software packages make developing, administering, analyzing, and reporting survey information much easier than using traditional

paper-and-pencil instruments. These surveys can be administered quickly and efficiently through district e-mail systems or district web sites.⁶ District information technology staff can provide the best advice on how to administer online surveys and how to meet local requirements related to online security and personal privacy.

Despite the advantages of surveying participants at a reasonable interval after participating in professional development, it may be difficult to get teachers to respond to surveys after they return to their classrooms. One way to increase the number of responses is to provide a small reward, such as a gift card, for completing the survey. A second option is to make receiving credit for participating in the professional development contingent on completing the survey. Over the longer term, if teachers see their perceptions reflected in reports or other communications or if they see the survey results leading to positive changes in professional development, they may be more willing to complete these surveys.

As an alternative to or to complement a survey, an evaluation can also include focus group interviews to collect data on teacher perceptions

Survey Monkey is an example of an easy-to-use survey software package. The basic survey package is free, and more comprehensive and versatile versions are available. For more information on this software and how to use it, visit www.surveymonkey.com.

of their professional development experiences. As with the more traditional surveys, the focus groups should be conducted at a reasonable interval after the professional development has ended. Note that these focus groups can also be included as part of ongoing data collection that follows major components of the professional development.

The primary advantage of focus groups is that they can yield rich data about teachers' perceptions of professional development and can complement the survey data. The primary disadvantages of focus groups are that they are more time-consuming than surveys, both in terms of data collection and data analysis, and they typically include relatively small samples of participants.

A final caution about focusing on participant perceptions: Evaluations that rely solely on teacher perceptions of some components of professional development, typically the training components that take place at the beginning of a longer series of professional learning sessions, are of limited use because they provide incomplete information. Many of these surveys are superficial and often trivialize teacher perspectives by limiting the focus of questions to unimportant or irrelevant topics. Put somewhat differently, smiley faces are not good metrics for examining professional perspectives.

Evaluations that combine examination of teacher perceptions of all components of the professional development (especially followup and school-based activities), a comprehensive look at implementation of the professional development, and professional development outcomes are much more useful in understanding what happened and how professional learning paid off for teachers and their students.

Looking at outcomes and indicators

Evaluations of teacher professional development collect data on outcomes for teachers, including their mastery of new knowledge and skills, changes in professional practice, and changes in student learning outcomes, behavior, and engagement in school that are associated with the teacher outcomes. In addition, evaluations may examine changes in

As a general rule, plan to include strategies for collecting data on all of the outcomes and related indicators included in the plan for the professional development being evaluated.

school organization and culture that may be linked to the professional development.

As a general rule, plan to include strategies for collecting data on all of the outcomes and related indicators included in the plan for the professional development being evaluated. Consider the examples in the box below.

These examples suggest progressively more extensive professional development. They also suggest increasingly complex evaluation efforts and clearly illustrate the need for multiple data collection strategies. More importantly, they illustrate the relationship between choices about indicators included in the plan for the activity and decisions about the kinds of data that will need to be collected to determine whether the outcomes were achieved. Using the example, the data collected to determine

whether the first outcome (participants' mastery of curriculum content) was achieved could include participant scores on a written test. The data collected to determine whether teachers can apply appropriate pedagogical practices could come from direct observations of instruction, from written responses to prompts calling for descriptions of instructional activities that would help students master various parts of the relevant content area, or from teacher logs that include self-reports on their use of various instructional strategies. Data on whether teachers are applying appropriate assessment strategies could come from reviewing teacher-developed classroom assessments and assignments. Data on changes in student learning

Choosing outcomes and indicators

If one of the expected outcomes of the professional development to be evaluated is having participants master the content of one of the subject areas included in a local or state curriculum framework, an indicator might be scoring at a specified level of proficiency on a written test on the content area after completing the professional development.

In a more ambitious professional development activity, one outcome could be mastering the content of one of the subject areas in the curriculum framework, with a second outcome being understanding of and ability to apply appropriate pedagogical strategies necessary to help students master the content. The indicator for the first outcome could be passing the written test on the content. An indicator for the second outcome could be a demonstration of the appropriate instructional practices in a simulated or actual classroom setting.

A third set of outcomes and indicators could focus on understanding and applying appropriate classroom assessments to gauge student mastery of content in one of the content areas of the curriculum, and a fourth set could focus on changes in student learning associated with changes in instruction.

could come from a review of samples of student work prepared in response to teacher-developed prompts related to the relevant curriculum content, a review of student scores on relevant sections of local benchmark assessments, or, less frequently, a review of student scores on state assessments.

Along with being sensitive to changes in local context that affect implementation of the planned professional development, keep in mind how changes in context affect the outcomes. Changes in school or district priorities could greatly influence teacher application and use of new knowledge and skills. For example, decisions to introduce a new reading program or a new math program, mentioned earlier as factors influencing the implementation of the professional development, also could mean that teachers are no longer expected to use instructional strategies and curricular materials that were the focus of the professional development being evaluated.

Also be sensitive to unanticipated outcomes that may be attributed to the professional development. For example, professional development that relies on math resource teachers to help math teachers implement new content and instructional practices could result in other teachers and school administrators understanding the potential benefits

of having resource teacher support in other areas. This new perspective could, in turn, lead to increased demand for school-based professional development provided and facilitated by skilled resource teachers in other content areas. Alternatively, poorly planned and incompletely implemented school-based professional development in one subject area could seriously undermine teachers' interest and willingness to participate in similar professional development in other subject areas. Both of these outcomes are important, and evaluators should make every effort to learn how and why they occurred.

Focusing on a sample of participants versus all participants

For professional development that includes large numbers of participants, participants in a large number of schools, and/or multiple instances of professional learning that extend over time, collect data from a sample or samples of participants for at least some parts of the evaluation. The advantage of looking at a sample of participants over time is that it becomes more feasible to gather detailed or in-depth information, especially about things like changes in classroom practice.

Focusing on a sample or samples of participants has several challenges. The first is the sampling task itself. One option is to select a random sample. A

second option is to draw a sample that is representative of all the participants. Drawing a representative sample requires having information about individual characteristics that might somehow affect participation patterns, application of new knowledge and skills, or both. For example, in a professional development activity focused on understanding and using instructional practices to foster reading comprehension, participants might be divided between teachers who are reading specialists and those who are not, or teachers with extensive experience and those who are new to the profession. In this example, the participant sample for the evaluation should reflect the overall distribution of teacher characteristics.

A second challenge is communicating the sampling procedure. How and why were participants selected for the evaluation? Despite evaluators' intentions to the contrary, identifying samples might suggest that some participants are being singled out for special attention or scrutiny. Address these concerns from the outset, and make every effort to allay any fears to ensure that teachers will be willing participants in the evaluation.

Adding a comparative dimension to the evaluation

A potentially powerful approach

to looking at professional development outcomes is to compare changes in participants' (the treatment group) knowledge and skills with changes in the knowledge and skills of teachers who did not participate in the professional development or who participated in other professional development (the comparison group). Alternatively, the evaluation could compare the learning outcomes for students of teachers in the treatment group with those of students of teachers in the comparison group. When done well, both kinds of comparisons help gauge professional development's impact on teacher knowledge and skills or classroom practice, and on student learning.

Adding a comparative dimension to an evaluation also poses substantial challenges and may add significantly to the cost. In most local evaluations, adding a comparative dimension to the evaluation will require the assistance of a skilled evaluator who can help with sampling issues, as well as complex data analysis. At a minimum, this design option requires identifying comparison groups of teachers who share many, if not all, of the characteristics of the participating teachers. For example, the comparison group should include teachers who teach at the same grade level and in the same content areas as the participating teachers. In addition, the

comparison group should teach students with similar characteristics and work in schools similar to participants' schools.

Identifying comparison groups matched to treatment groups on certain variables helps to focus on the treatment — professional development — as the cause of the observed outcomes and to eliminate other explanations of causality.⁷ An even more powerful evaluation design is randomly assigning teachers to treatment and comparison groups and comparing the two groups on the outcome variables at the end of the professional development or at the point at which planners expect to be able to observe the intended outcomes. Random assignment designs are the gold standard in studies of program effectiveness and impact.

For most districts and many evaluations, both design options have practical disadvantages. They can be costly and time-consuming. Second, they can require large samples of teachers and students. In some cases, not enough teachers may be available to form either a treatment or comparison.8 A third challenge may be having to justify the

random assignment of teachers and/or students to treatment and comparison groups to teachers, parents, and others in the local education community.

Preparing for data collection

In every evaluation of teacher professional development, preparation is essential for the effort's success. Preparing for data collection involves:

- Selecting the appropriate instrument(s);
- Preparing staff who will collect the data; and
- Gaining access to people and data. In some evaluations, completing these preparations will be fairly simple. In others, preparations will be more complicated. Some preparations are inexpensive, while others are expensive and time-consuming. In some evaluations, costs trump other factors in deciding how to complete these preparations. Recognize and be prepared

Selecting appropriate instruments.

(Resources included in Appendix A provide extensive information about instruments that can be used to evaluate

to explain the trade-offs being made.

Carefully identifying professional learning needs and strategically targeting participants as the professional development is being planned help define which variables can inform identification of appropriate comparison groups.

One solution to this problem is to identify comparison groups from other districts. While this strategy can add rigor to the evaluation design, it also adds cost and may not be feasible for other reasons.

teacher professional development.) In addition to participant surveys discussed earlier, evaluations of teacher professional development can employ:

- Written tests to assess participants' mastery of professional knowledge (including knowledge of curriculum content) and skills;
- Protocols for observations and interviews to collect data about participants' perspectives on the professional learning; their implementation of professional development; and their application of new knowledge and skills in their classrooms and other settings;
- Personal logs and journals to record accounts of the application of new knowledge and skills and reflections on these experiences.

Some evaluations collect data on students. Most evaluations that focus on student outcomes associated with teacher participation in professional development rely on student work samples, results on state and local assessments, and administrative records of student attendance, behavior, and discipline.

A practical first step in selecting instruments is to see if appropriate instruments already exist. For example, some districts have developed generic survey instruments to gauge teacher

perspectives on their professional development experiences. These instruments may require only minor modifications to be appropriate for the evaluation being planned. Some curriculum materials include assessment instruments to measure content mastery, and locally developed observation protocols and guides may be useful to gauge how well new practices are being implemented. Finally, a number of instruments measure teacher attitudes.9

Adopting and/or tailoring existing instruments can be relatively inexpensive and require very little time. In some cases, the developer may provide guidance for administering and using these instruments. In addition, results from other evaluations using these instruments may be available to use for a comparative analysis.

Several criteria can help guide selection and/or development of instruments.

Instruments should be designed to minimize the burden on respondents and users. Observation protocols should not require more than 30 minutes per observation, and less if possible. Surveys should require 15 to 20 minutes at most and less if possible. Overly long surveys and interviews tend to yield bad data and

Visit http://people.ehe.ohio-state.edu/ahoy/research/instruments/ for links to a number of survey instruments and detailed information about their use and psychometric properties.

- may result in respondents' resistance or unwillingness to participate in other data collection.
- The content or substantive focus of the instruments should be aligned with the content of the professional development. Observation protocol prompts should call for observations and data that explicitly reflect key elements of the content of professional development (e.g. frequency of teacher use of specific questioning strategies, teacher use of appropriate curriculum materials, teacher use of appropriate strategies to gauge student learning).
- As a general rule, observation protocols should call on observers to describe classroom activities. These protocols should not call on observers to judge or rate the activities (e.g. rate teacher proficiency on a scale of 1 to 5). Protocols that collect descriptive data could, for example, call on observers to count or report:
 - The number of times a teacher uses various questioning strategies;
 - The number of students to whom the teacher directs questions and feedback;
 - Teacher use of academic language versus less formal language;
 - The presence and use of certain

- instructional materials and equipment;
- The particulars of how a teacher uses prompts to assign student work (e.g. time spent discussing the assignment, opportunities for students to collaborate and collect information).

In contrast, protocols that do not rely on well-defined rubrics or that call for anecdotal reports or subjective judgments

As a general rule, observation protocols should call on observers to describe classroom activities. These protocols should not call on observers to judge or rate the activities (e.g. rate teacher proficiency on a scale of 1 to 5).

- yield data that are difficult to analyze or not very useful. Protocols that call for observers' judgments or ratings require that the observers receive extensive training to ensure consistency within and across the judgments made during the observations.
- Survey instruments and other self-report forms should, with few

exceptions, include close-ended items. 10 Responses to these items are easier and less expensive to analyze, and they ensure a degree of consistency among respondents. Responses to open-ended questions require careful coding and are therefore more difficult and more expensive to analyze.

A note of caution about adopting locally developed instruments, especially instruments designed for a purpose other than evaluating teacher professional development: Instruments that are generic or that focus on indicators other than those included in the evaluation will not yield data that will help gauge the effectiveness of the professional development. Selecting or developing appropriate instruments depends largely on clearly specifying what the instrument is intended to help measure. What are the key indicators that new practices are being implemented? How often should the indicators be present and under what circumstances? Ask these and other questions. Those planning the professional development should provide the answers.

Carefully review instruments to be

sure they are suitable for the evaluation being planned. For example, protocols, guides, and checklists developed for classroom observations, walk-throughs, and teacher performance appraisals may be useful to gauge the impact of professional development on teacher performance. However, be sure these instruments are designed to collect data on the specific indicators included in the evaluation. In other words, the instrument should meet reasonable standards for validity.

For evaluations that focus on student outcomes to gauge the long-term impact of professional development, be sure that assessment tools, including locally developed tests and assignments or prompts used to generate student work samples, explicitly align with the knowledge and skills teachers are expected to demonstrate as a result of participating in professional development.

When using student work samples, evaluation planners and professional development planners should think carefully about how the assignments and prompts will be administered and

¹⁰ Close-ended items call for respondents to select from among two or more response options. These items may ask respondents to pick from several statements one that best describes their perspectives on a particular issue (e.g. the usefulness of a particular professional learning activity, the extent to which they have had opportunities to apply new knowledge and skills). Close-ended items also may ask respondents to indicate the extent to which they agree or disagree with certain statements or to respond yes or no. Open-ended questions ask respondents to write a few words or sentences.

Using student work samples in evaluating teacher professional development: A cautionary example

he professional development planners and evaluation planners agree that student essays on the causes of the Korean War will be one source of data about student outcomes that result from teacher participation in a longterm professional development designed to help improve instruction in 20th-century American history. Teacher A and Teacher B have recently completed three months of professional development, and the evaluation team will review their students' essays to gauge whether the teachers successfully implemented the instructional strategies and curriculum content that were the focus of the professional development.

In reviewing the completed essays, the evaluation team observed that the essays of the students of Teacher A were much shorter and less well-developed than those of the students in Teacher B's class. The team also observed that the essays of Teacher A's students reflected limited understanding of the economic and political factors that preceded the conflict. Because the two teachers gave their students the same assignment, and because classroom observations

of the two teachers that took place after the professional development indicated that both had mastered the new content and related instructional strategies, the evaluation team initially concluded that the students of Teacher B were more able than the students of Teacher A. However, there was no other obvious evidence of differences in students' ability; the evaluation team was puzzled by the result and decided to look a second time at the observation data. They discovered that although instruction was quite similar in the two classrooms, Teacher A had written the prompt on the board at the beginning of a class period and, after responding to a few questions, had given the students two days to complete their essays. Teacher B had spent most of a class period discussing the assignment and responding to a variety of student questions. Next, she organized students into small groups to brainstorm possible explanations for the causes of the Korean War. After that, she encouraged them to go to the school library to collect additional information before completing their essays. The result of these different approaches to the same assignment was essays of very different quality.

whether and how the evaluation will monitor the process. Differences in how assignments are designed and/ or how prompts are used may result in considerable differences in student work. These differences could, in turn, lead to differences in judgments about instructional practices. Consider the example in the box on p. 37.

Preparing the evaluation team. No matter what evaluation design or data collection instruments are used, a critical step in conducting good evaluations is to thoroughly prepare those individuals who will be responsible for collecting data. Ideally, this preparation should include:

A thorough orientation to the evaluation plan, with special attention to data collection tasks, responsibilities, and the amount of time required. This is particularly important when data collection includes interviews, observations, and other direct contact with participants. These forms of data collection can be time-consuming, so data collectors need to understand the amount of time that they will need to devote to the task, especially if district staff are responsible for collecting data. Review confidentiality issues that may arise in the course of collecting data collection. Data collectors need to understand that it is imperative to protect the identity of participants

- in the evaluation, and with whom and how they are expected to share information.
- A detailed review of what expected changes in practice look like. This review should familiarize data collectors with the details of new instructional strategies and other outcomes that are the focus of the professional development. For example, if the professional development is designed to help teachers develop new questioning strategies and apply the strategies in their classrooms, preparation for data collection ideally should include opportunities to see concrete examples of these strategies in practice.
- A detailed review of the data collection instruments and how to use them. Explain to data collectors the purpose of using the instrument or instruments and expectations for how data are to be recorded and/ or reported in preparation for data analysis. Provide clear guidelines for the frequency and duration of use of observation protocols, interview guides, and similar instruments. For example, if an observation protocol will be used to measure instructional changes or application of new instructional strategies and content, observers need to know how many

- times they are expected to observe each teacher, appropriate intervals between observations, and how they are to record and report data.
- Opportunities to practice using data collection instruments, such as observation protocols and interview guides. Having data collectors practice using the instruments ensures that they understand their responsibilities and that data collection is consistent and thorough. Practice in using observation protocols also may afford opportunities to test the instruments' reliability and to make refinements. Practice might include, for example, role-playing in which members of the evaluation team use the interview protocols with other team members or team members completing observation protocols as they watch videos vignettes of classroom instruction.

Securing participation in the evaluation. Adhering to three simple principles can increase the likelihood that teachers and others will be willing to participate. The principles are:

Transparency. Be clear about the evaluation's purposes, what participation will entail in terms of time and other possible commitments, what data will be collected and how, and

- how evaluation results will be communicated and to whom. Teachers may be concerned about the extent to which others will view the instruments as an evaluation of the teachers and their work. Reassure teachers that the evaluation is assessing the professional development and not teacher knowledge and skills and/or their performance in the classroom. At the same time, make it clear that teacher knowledge and skills and performance are included among the expected outcomes and are, therefore, the focus of the data collection activities.
- Confidentiality. Assure teachers and others who participate in the evaluation that all data collected from and about them will be maintained in strict confidence and that they will not be identified by name in any reports or other communications about the evaluation. As appropriate, explain the procedures for maintaining confidentiality. For example, the evaluation team will probably store the data in secure files accessible only to team members and may assign teachers and others who participate in the evaluation an identification number so that names and other identifying information can be

- eliminated from data files.
- Voluntary participation in the evaluation. As a general rule, teachers and others who may be involved in the professional development as participants or in other ways should be invited but not required to participate in the evaluation. They also should be permitted to opt out of the evaluation at any point in the process. To ensure that participants understand what is being asked of them, prepare a short, written description of the evaluation that, at a minimum, explains the evaluation's overall purpose, the amount of time required to participate, and how the results will be reported and to whom.

Gaining access to students and student data. If an evaluation focuses on changes in student learning or in other student outcomes (e.g. attendance, truancy, disciplinary referrals, suspensions, expulsions) or on student perceptions of changes in teacher performance, it may be necessary to seek parental consent to gain access to student records, to interview students, or to ask them to complete a survey. Many districts have well-defined procedures for gaining access to students and student data. Pay close attention to these procedures. Written communications explaining the evaluation's purposes,

the kinds of data that are necessary, procedures for protecting student privacy and confidentiality, and how the data will be used are important. In addition to obtaining parental consent, work closely with district staff who maintain district data systems. Indeed, it may be necessary to call on them to extract data from student files.

Special considerations in using classroom observations

Classroom observations, when done well, are an excellent source of data on professional development outcomes related to teachers' understanding and application of new knowledge and skills. The success of these data collection activities depends, in large part, on the availability of good instruments and the work of observers who are well-prepared for the task. Observers should:

- Conduct multiple observations of each teacher over several weeks or perhaps even a few months;
- Complete data collection reports as soon as possible but no later than 48 hours after the observations;
- Avoid scheduling observations on the days before or after school holidays or on "special days," which may have shortened or alternative schedules or otherwise represent atypical instructional periods;
- Immediately report any problems,

including concerns from teachers who are observed, to the person leading the evaluation and/or managing the observations.

Also think about following up classroom observations with short interviews to collect additional data. These interviews can elicit teachers' views of what happened, how things worked, and why. These interviews can help observers examine teachers' reasons for using various content and instructional strategies as a way of learning about the connections between teacher knowledge and the application of specific instructional strategies. Schedule interviews to avoid additional disruption of classroom activities, but as soon as possible after the observations and no later than the end of the day on which the observations were conducted.

An important issue in planning the observational components of an evaluation is to decide what role, if any, district staff will play in data collection.

School-based professional development staff, supervisors, principals, and assistant principals typically spend a lot of time in both formal and informal classroom observations. Therefore, it may make sense to recruit them to collect data for the evaluation. Recognize, however, that it will be difficult for principals and others responsible for teacher performance appraisals to separate their

role in an evaluation of professional development from their performance appraisal role. In addition, teachers who are included in the evaluation may not understand or appreciate the dual roles and may be uncomfortable during observations related to the evaluation. (They may be uncomfortable being observed as part of a formal performance review, but that is another matter.)

One option for involving principals and assistant principals in collecting data is to have them interview and observe teachers in other schools. Outside observations have several potential advantages. Using professionals from outside the school lends an important element of objectivity and credibility to the evaluation and helps to distinguish it from performance reviews. Second, this strategy affords the data collectors opportunities to learn what is going on in schools other than those in which they normally work. These data collection activities, especially when they are accompanied by collaborative debriefings with all of the observers, can provide valuable professional development for the data collectors.

In addition to deciding whether to recruit building administrators and district staff as data collectors, consider using information collected for other purposes (e.g. performance reviews, monitoring implementation of a new practice) in an evaluation of professional development. Taking advantage of information that has already been collected can be tempting, and it is possible that the professional development planning team used some of these data to determine the need for the professional development and to identify the teachers who should participate.

At least three factors will influence decisions about using these data. First,

Involving teachers in collecting and later analyzing data will extend and enrich their professional learning. Involving teachers in evaluating their professional development establishes their ownership of the effort as well as the results.

> determine whether district personnel/ human resource policies and negotiated agreements prohibit using data from performance reviews for any other purpose or if they require that teachers give their permission for other uses of this data. Second, carefully review the alignment of the data collection process (e.g. formal observations, walk-throughs) with the content and purpose of the professional development. Misalignment between the data

collection process and the purpose of the professional development means that the data collected for these other purposes will be of limited use for the evaluation. Such misalignment could easily generate inappropriate results and lead to incorrect conclusions about the professional development. Third, review the quality of the data collection process and the data. Inadequate data collection and incomplete or weak data are of no use to the evaluation. (The same considerations apply to using these data for determining the need for the professional development and who should participate.)

Involving teachers in data collection

In addition to taking active roles in planning and leading professional development, teachers also can play key roles in evaluating professional development, especially professional development that is designed by school improvement teams as part of school improvement plans and that takes place in school as part of regular school activities. Involving teachers in collecting and later analyzing data will extend and enrich their professional learning. In addition, involving teachers in evaluating their professional development establishes their ownership of the effort as well as the results.

One way to involve teachers in data

collection is through observing peers' classroom practices. Peer observations generate a lot of information on teaching practices and help school faculties develop and use a common language about instruction and how to improve it.11 In addition, teachers can help develop observation protocols and the preparations for using them. Teachers preparing for peer observations should practice using the protocols and need clear guidance and explanations about how to record and share data.

Although there are benefits to teachers observing peers to collect data, several challenges need to be addressed. These include:

- Establishing an atmosphere of trust in which observations and comments can be freely shared. Principals and other school leaders need to establish this atmosphere among teachers, to help them recognize the payoffs of the observations, to promote frank discussions of the results of improved practice, and to determine the focus of future professional learning.
- Setting aside adequate time in the regular school schedule for conducting observations, recording and reviewing data, and discussing observations with colleagues and

the evaluators. These tasks require committing time during the regular school day and arranging to cover the classes of teachers conducting the observations. Ideally, observations can take place during observers' preparation time or other noninstructional periods. Principals and teachers will need to work together to find ways of covering classes to minimize disruptions in instruction.

Orienting them to the task, especially strategies for collecting and analyzing data and discussing the data (including observational data and student work samples) with colleagues. The specifics of this orientation are similar to preparing other data collectors, as explained earlier in this section.

Summary

Most evaluations of teacher professional development will focus on whether the program or initiative took place as planned, participants' perceptions of the professional learning as part of the overall plan, and whether the professional development achieved its intended results in terms of changes in teacher knowledge and skills, changes

¹¹ For a more extensive discussion of how to plan and use peer observations, visit the Annenberg Institute's "Tools for School Improvement Planning" at www.annenberginstitute.org/tools/index2. php.

in professional practices, and, in some cases, changes in student outcomes that are attributable to changes in teacher practice.

Determining whether the professional development occurred as planned is essentially a process of documenting the extent to which the necessary resources were available, whether those teachers who were expected to participate did so, and whether all of the planned professional learning took place as planned. When professional development does not take place as planned, a good evaluation will attempt to document why.

Teacher perceptions of the quality and usefulness of professional development are often early indicators of whether teachers will benefit from the learning and apply what they learned in their schools and classrooms. Teacher perceptions also may help pinpoint substantive problems in the professional development design. Well-crafted surveys and other data collection instruments can provide valuable data about teacher

perceptions. If these are the only source of data, the evaluation will be of limited use. However, when combined with other kinds of data, they can add considerable rigor to an evaluation.

Examining professional development outcomes and indicators can be a challenge because good evaluation requires carefully selecting instruments, carefully preparing to use them, and addressing the knotty problem of attributing causality to professional learning. Evaluation planners may want to consider evaluation designs that focus on samples of participants and include comparison groups. Both options can add rigor to the evaluations. At the same time, these options are costly and may be beyond the reach of most evaluations. These sophisticated design options may help determine causality, but a more practical strategy may be to talk with teachers and ask them to explain why they do what they do. Carefully analyzing what they say can help explain how professional development contributes to changes in practice.

Data quality and data analysis

ata analysis begins early with ongoing monitoring of data quality and continues with the application of appropriate analytic procedures. Just as data collection reflects decisions about outcomes and indicators that will be of interest in the evaluation, data analysis anticipates the reporting task and sets the stage for presenting evaluation findings. This section provides suggestions for monitoring data quality and general approaches to data analysis. The guide does not, however, discuss specific statistical procedures that evaluators can use to analyze evaluation data.

Monitoring data quality

A key to successful evaluation is having solid data. In addition to selecting appropriate instruments and preparing the evaluation team to use them, evaluators need to monitor the quality of data as the data are being collected. Although there are exceptions, gathering additional data after completing the planned data collection is difficult. Therefore, monitoring data quality while

data collection is under way is essential to the evaluation's success. Here are some tips.

Monitor response rates on surveys and other quantitative data collection.

When administering surveys, pretest/ posttest instruments to measure changes in participant knowledge, or similar instruments, ensure that participants are completing and returning the instruments. Ideally, establish a procedure for tracking individual survey responses that will make it possible to follow up with nonrespondents. If surveys are administered online, send e-mail reminders to nonrespondents. If individual responses cannot be tracked, send e-mail reminders to all participants. If the survey permits identifying specific groups of participants (e.g. elementary school reading teachers, elementary school special education teachers), send e-mail reminders to groups with low response rates.

The higher the survey response rates, the better. Time and resource constraints permitting, aim for response rates of at least 80% for all participants or 80%

for each identifiable group. Analyzing data or drawing meaningful conclusions is more difficult if response rates drop below 80%.

Monitor record-keeping systems that track individual participation and implementation of the activities specified in the professional development plan. To be able to report on participation patterns and implementation of key components of the professional development, recordkeeping systems need to be developed and maintained. As professional development increases in size, scope, and duration, record keeping becomes both more important and more complicated. Nevertheless, these data are critical in order to be able to present detailed findings about participation and implementation. A problem in many evaluation reports is that they describe what was supposed to happen and assert that teachers participated as expected. Both the description and the assertion may be valid, but neither can be supported without solid evidence.

Sign-in sheets are good sources of data on participation in large-group professional development. Work with professional development providers and facilitators to ensure that participants' attendance at these sessions is recorded. Ensure that the sign-in sheets collect information at an appropriate level of

detail. For example, if the professional development begins with five days of workshop sessions, have a signin sheet for each workshop session. Having separate sign-in sheets permits tracking overall participation as well as participation patterns. Enter data from the sign-in sheets in the evaluation database as soon as possible after participants sign in.

When professional development includes multiple sessions over several weeks or months, organize the recordkeeping system to track individual teacher participation in all of the professional development. Later, these data can help profile participation patterns. If the variations are significant, compare and contrast participation patterns to determine if they may relate to teacher outcomes. In the shorter term, interim evaluation reports may pinpoint gaps in participation, making it possible for professional development providers and facilitators to identify ways to improve participation as the professional development continues.

Work with providers and facilitators to track any follow-up professional development, such as observations, feedback, collaboration with other teachers, and assistance from schoolbased professional development staff. One approach is to ask school-based professional development staff to

maintain simple activity logs to record information about their interactions with participants in school or classroom-based follow up. Data from the logs can easily be combined with data from sign-in sheets to generate more complete participation records.

Monitor the accuracy and completeness of entries in observation protocols and similar data collection instruments. If data collection includes structured or unstructured observations, interviews with teachers and others, or similar activities, monitor the processes to ensure that the data collection activities are taking place as planned. Also check completed reporting forms to ensure that data are being recorded correctly. As with the other data quality control efforts suggested here, tracking these efforts can help ensure that there are no gaps in the data and that the data are high quality. Data collection and data quality problems are easier to resolve if they are identified early while data are being collected, but are almost impossible to resolve after the fact.

When an evaluation includes several cycles of observations and interviews, convene the data collectors after each cycle to review the data collection activities. Invite data collectors to discuss any problem they experience in using observation and interview protocols. Are they seeing or hearing important things

that are not included in the protocols, and, if so, how can the protocols be modified to capture these things? What findings are emerging? Should data collection instruments and plans be modified to examine these findings in more depth?

Data analysis

Data analysis can be very simple or complex, or, more likely, somewhere inbetween. In almost all evaluations, it is a good idea to start with the basics. More complex analyses, including sophisticated statistical analysis, occur later if they are warranted and feasible given the quality and quantity of the evaluation data and the resources available.

Learn about the data by starting with the basics. A real benefit of monitoring data quality is that the process helps familiarize evaluators with the data and what the data suggest about the professional development. Indeed, an important first step in data analysis is to get to know the data and to see what they appear to suggest even before conducting a more careful and systematic analysis.

In many evaluations of teacher professional development, much of the data analysis involves counting. A starter list of questions can be answered by counting various data:

 How many teachers participated in all of the learning opportunities,

- and how many teachers participated in only a few of the learning opportunities?
- How many participants gave the professional development high marks for usefulness and relevance?
- How many participants reported that they received adequate help and encouragement in applying new knowledge and skills in their classrooms?
- How many participants viewed the professional development as a good start versus providing them with all the information they needed to apply new knowledge and skills?
- How many participants scored at or above proficient on a written test of content-area knowledge administered one month after the professional development? Are consistent gaps in content knowledge evident?
- Based on completed observation protocols, how many participants could be rated as proficient in applying new instructional strategies in their classroom? Do observational data suggest gaps in application?

Depending on the professional development design, the kinds of data available, and the quality of the data systems developed for the evaluation, it may also be possible and useful to compare and contrast the perceptions and experiences of various groups

of participants. For example, if data collection for an evaluation of large professional development activity included participant surveys and the surveys collected information about teacher characteristics such as years of experience and particulars of current teaching assignments, analyses could compare and contrast the perceptions of various groups of teachers (e.g. new or inexperienced teachers and more experienced teachers, lower elementary grade teachers and upper elementary grade teachers, reading teachers and content specialists). An example in the box on p. 49 illustrates a more complex comparison and the kinds of insights it can yield.

Quantify the qualitative data.

Qualitative data, including data collected through observations, interviews, selfreports, and student work samples, yield rich descriptions of professional learning, classroom instruction, and student learning outcomes. These descriptions are especially useful when they include some sort of quantification to illustrate the extent to which they are typical or representative of all participants' experiences. Thus, observation protocols that yield detailed descriptions of instructional practices (i.e. the number of students engaged in class discussions, the number of students to whom teachers direct particular kinds of questions, the

A second look at evaluation data

he activity being evaluated focused on helping participants understand and apply instructional strategies to increase reading fluency. The first phase of professional development included a concentrated series of workshops on these strategies, and the second phase included ongoing observations and coaching from school-based reading resource teachers. The evaluation design called for documenting participation in phases, using a written test to assess teachers' understanding of instructional strategies to develop reading fluency and assessing teachers' application of the strategies through a series of structured observations four to eight weeks after the teachers completed their professional learning, including the school-based supports.

Initial evaluation results indicated that teachers participated in all learning opportunities and that most gave the professional development high marks for potential usefulness. Most participants also agreed that the strategies would work well with their students. In addition, their written test scores clearly suggested that a majority of participants understood the new instructional strategies.

To the evaluators' surprise, however, the initial review of the observational data revealed rather large differences in classroom implementation of the new instructional practices. Because they were able to link the data on coaching support with the data on classroom instruction, evaluators were able to examine the extent to which more

extensive coaching appeared to be related to greater implementation of new instructional practices. Subsequently, when evaluators reviewed activity logs maintained by the reading resource teachers, they found considerable variation in amounts and kinds of school-based follow-up to support implementation. Some teachers received help several times a week, while others received help once a week or even less. When evaluators re-examined observation protocol data used to measure the extent to which teachers applied new practices, they found that teachers who had received more follow-up help were better able to use new instructional practices than were teachers who had received less help.

Looking at the observation records a second time, the evaluators also found school-level differences in the amount of coaching support that teachers received. Teachers in some schools received considerably more support than did teachers in other schools. Curious, the evaluators returned to the schools to talk with principals and reading resource teachers about the arrangements for working with individual teachers. These conversations revealed important differences in how principals and reading resource teachers worked together and in the amount of support and encouragement principals provided. This finding led evaluators to conclude that stronger working relationships and higher levels of encouragement and support were clearly related to the reading resource teachers providing more classroom support.

availability and arrangement of classroom supplies and materials, etc.) also make it possible to report on how many teachers are actually implementing new practices. Reporting observers' judgments about the extent to which teachers are implementing new practices makes it incumbent on the evaluators to explain the extent to which the observations may reflect observer bias.

When an evaluation collects more open-ended data, such as data from semistructured observations or interviews, the analytic task is to review write-ups from data collection activities for key words and key themes and to count their frequency. Because of the costs associated with preparing observers and interviewers to carry out these data collection activities, as well as the costs associated with data analyses, think carefully about pursuing this design option. One solution to the problem of analyzing large amounts of qualitative data, especially data from structured and semistructured observations and interviews, is to use software programs designed specifically for this purpose.¹² The advantage of using software is that it helps organize and analyze large amounts of qualitative data.

Anecdotal data, including selfreports of implementation and use of new instructional practices, can be useful in analyzing changes in teacher practice. Once again, counting is important. How many teachers reported applying a new instructional strategy and provided a concrete example? How many teachers reported changes in student outcomes that resulted from teachers applying a new strategy and provided a concrete example of change in student work or assessment results?

Explaining cause and effect in evaluations of teacher professional development

Perhaps the greatest challenge in evaluating teacher professional development is determining patterns of causality. The bad news is that the evaluation designs necessary to empirically determine causality are beyond the scope of most state and local evaluation efforts. The good news is that there are options for looking at causality in evaluations, including several discussed in this guide.

Look carefully at the data professional development planners used to assess the need for the professional development. What do these data suggest about teacher knowledge, skills, and practice prior to the professional development? For planning and design

¹² Visit www.gsrinternational.com for more information about software available for use in qualitative data analysis. Some versions of the software are available at no cost.

purposes, these data can be considered as baseline or pre-intervention data. In general, the goal of professional development is for teachers to move from the baseline to higher levels of knowledge, skills, and performance, and the purpose of evaluation is to determine whether these changes did occur and, if so, whether they are attributable, at least in part, to teacher participation in the professional development.

Next, following the suggestions offered earlier, determine whether the professional development was implemented or occurred as planned. If it did take place as planned, look for evidence that the intended changes in teacher knowledge, skills, and professional practice (as specified in the outcomes and indicators included in the original plan) occurred. If these changes did occur and if they occurred after participation in the professional development, the evaluation should focus on explaining the reasons for those changes. If the evaluation finds substantial variation between the original plan and the professional development that occurred and the evaluation also finds changes in participant knowledge, skills, and/or professional practice, look

for the reasons for the changes.

One way to examine causality in the kinds of evaluations discussed in this guide is to ask teachers directly about whether and how their professional development experiences contributed to changes in knowledge, skills, and professional practice. For example, after a series of classroom observations that yield clear and consistent evidence of appropriate application of instructional strategies that were the focus of the professional development being evaluated, interview teachers to ask where and/or how they learned about these strategies and what motivated them to try the strategies in their classrooms.¹³ Follow-up questions should probe for concrete examples of factors that influenced teacher use of new strategies. Follow-up questioning should also explore the relative salience of various factors in teacher decisions. It is possible, even likely, that teacher responses will suggest an array of factors contributing to these changes. Carefully analyze these responses to help evaluators understand whether and how participation in professional development caused changes in teacher knowledge, skills, and performance.

¹³ It is generally not a good idea to rely on surveys or other self-report forms to ask teachers about the factors that influenced their use of new strategies unless direct follow-up permits probing their initial responses for concrete examples. Open-ended survey questions are especially difficult to analyze and are not good sources of information.

Extending the causal links to student outcomes related to teacher participation in professional development is even more difficult. This difficulty also underscores the importance of examining indicators of student learning that are closer (proximal indicators) to the focus of the professional development than those that are more distant (distal indicators). Examples of proximal indicators are student work samples produced in response to prompts given by teachers and scores on locally developed assessments. Examples of distal indicators

Teacher involvement in data analysis is, by itself, a valuable professional learning opportunity.

are scores on state assessments.

The advantages of using proximal indicators are that proximal indicators are observable and measurable sooner than are distal indicators, and proximal indicators typically reflect a narrower range of student learning. A related advantage is that because they are observable sooner — closer to the period of teacher participation in professional development they are less likely to be influenced by other variables. Nevertheless, be careful about linking teacher participation in

professional development to changes in student learning.

In the end, findings and conclusions of the professional development evaluation are almost certain to be somewhat tentative and speculative. The challenge is to present data clearly and to provide a compelling case for linking participation in professional development to changes in teaching and learning. The case is most compelling when it recognizes the complexity of the causal chain and acknowledges that a variety of factors contribute to changes in teaching and learning. The case is least compelling when it simply asserts that teacher participation in professional development resulted in improved teaching and learning.

Involving teachers in data analysis

Just as they can be involved in collecting data, teachers can play a role in analyzing data. Teachers can, for example, share peer observation results and examine what they learned about implementation of new instructional strategies. Teachers also can participate in reviewing student work samples that serve as indicators of the implementation of new instructional strategies.14 Teacher involvement in data analysis is, by itself, a valuable professional learning opportunity.

¹⁴ For more ideas about involving teachers in the analysis of student work and using protocols in this process, visit www.lasw.org/protocols.html.

Strategies for involving teachers in data analysis are similar to those related to involving them in data collection, which were discussed in the previous section.

In some evaluations, evaluators may facilitate teachers' work on analytic tasks. For example, if the analytic task entails reviewing a collection of student work samples to look for evidence that teachers who participated in the professional development are applying new instructional practices in their classrooms, evaluators could call on teachers, including participants, to assist in the analysis. The evaluator, perhaps in collaboration with teachers, would develop a protocol or rubric to guide the analysis of student work samples. Prior to distributing the work samples, the evaluator would train teachers in using the instrument to ensure a degree of consistency in the reviews. Each teacher would receive a set of work samples and be asked to use the protocol to complete the review. The work samples would not identify students or teachers. After a reasonable amount of time for review, the evaluator would facilitate a discussion organized around the protocol and what the teacher-analysts saw when they looked at the student work samples. Alternatively, a group of teachers might decide to collaboratively evaluate their own professional learning by examining

student work samples. In this approach, the teachers could develop the protocol for reviewing the work samples and discuss their observations. In both cases, the completed protocols and detailed records of the conversations would provide important data while also serving as a potentially powerful approach to data analysis.

Summary

Data analysis is an iterative process that should begin soon after data have been collected. Early tasks are monitoring data quality, which, depending on the evaluation design, can include monitoring survey response rates and following up with nonresponders, making sure that record-keeping systems are functioning properly and that data are being entered according to plans, and ensuring that observations, interviews, and other data collection are proceeding on schedule.

Evaluators should begin formal analysis of data by familiarizing themselves with the basics, including comparing and contrasting the perceptions and experiences of various groups of teachers. Also examine data on professional development outcomes and indicators. The challenge is to carefully document outcomes, typically described in terms of changes in teacher knowledge, skills, and/or

practice. Some evaluations go a step further and try to gauge the impact of these changes on student learning and other student outcomes. The central challenge in this phase of the analysis is to examine causality. What evidence is available to suggest how and to what extent participation in professional development contributed to changes in teacher outcomes? Sophisticated evaluation designs, including carefully chosen comparison groups and complex analytic procedures, can address this issue. The important payoffs of these approaches notwithstanding, they are

typically beyond the scope and resources available for most evaluations of teacher professional development, including almost all local evaluations.

This guide recommends a more direct approach to getting at causality. In the context of collecting data on various teacher outcomes, evaluators can ask teachers to explain certain behaviors, particularly the reasons behind them. This questioning must be done carefully, and it should probe for concrete examples as well as evidence of other factors that may have contributed to changes in practice.

Reporting

The last step in any evaluation is preparing the evaluation report. As with the evaluation itself, there is no single formula for the report. Reports should, however, adhere to some basic principles to help readers understand the professional learning that took place, the extent to which the professional development contributed to changes in teacher knowledge and skills, and whether and how teachers applied the new knowledge and skills in their classrooms. More ambitious reports examine the links between these changes and changes in student outcomes. In general, evaluation reports should:

1. Anticipate readers' information needs and interests.

Planning the evaluation involved anticipating who would be interested in the results. Potential audiences include funders, state and local policy makers, district leaders and central office staff, building administrators, and, of course, the participants. Each group is likely to have different interests, although there may be some overlap. For example, all of these groups and others who may read the report will want to know whether the professional development achieved the results specified in the original design. Audiences are likely to vary in their interest in whether the professional development unfolded as planned, although principals, participants, and staff who worked on the professional development are likely to be interested in problems that may have arisen as the professional development unfolded.

Almost all readers will welcome short, nontechnical reports. Here are ways report writers can help readers:

- Include an executive summary and clear, concise summaries at the end of each major section of a report. The executive summary is often of primary interest for the majority of readers. The executive summary should concisely present the main points readers should take away.
- Use advance organizers to provide a map of the report and its key points. Advance organizers guide readers through the report by pointing out

- what is coming and what has been discussed.
- Define important terms (and possibly include a glossary). Explaining or describing instructional practices that may be the focus of the professional development helps readers understand the activity and interpret evaluation results. Similarly, explaining what the professional learning (e.g. teacher study groups, peer observations, action research) entails also helps readers understand and interpret evaluation findings and conclusions.
- Provide concrete examples to amplify descriptions and observations. One of the best ways to add richness and depth to an evaluation report is to include anecdotes and relevant quotes to highlight important points. Choose examples carefully and present them in context to explain what they actually represent. A quote from a teacher that reflects many participants' views may be worth sharing. Another teacher's comment that reflects a minority view also may be important. Both examples communicate important information, but this information is most useful when presented in context.
- Carefully check the facts to avoid misunderstanding and

- misinterpretation. Few things undermine an evaluation report's credibility more than errors in descriptions of the professional development and errors in reporting findings. Review drafts with great care and, whenever possible, ask several people who did not contribute to the report to review and comment on the draft.
- Create clear and simple charts and exhibits to present data and illustrate important findings. Including charts and exhibits is an efficient way to communicate lots of information or explain key concepts. However, charts and exhibits that are unnecessarily complex or that require a lot of study can be distractions and don't add value to the report.
- Include technical appendices to provide additional detail on the evaluation design, data collection, and data analyses for interested readers. Most readers will not be interested in extensive technical detail about data collection and data analysis, so it makes sense to include this information in appendices.
- Use the active voice to communicate clearly and concisely. Reporting in the active voice increases readability and adds precision to descriptions and explanations.

2. Explain the evaluation's purpose and address each of the evaluation auestions.

Introduce the logic model (or other conceptual framework) that guided the professional development and informed the evaluation. Alternatively, discuss the key assumptions that guided the professional development and the evaluation.

After discussing the purpose(s) of the evaluation, list evaluation questions and explain why they are important. The answer(s) to each question should include as much detail as necessary to help readers understand the evaluation results, but these discussions should also include a clear, concise summary of the answers.

3. Describe the approach to the evaluation.

Explain what data were collected, how the data were collected, from whom they were collected, and the timeline. Include copies of key data collection instruments, or include the instruments in technical appendices. Finally, present information about response rates, the extent to which complete data are available for all participants included in the evaluation, and any problems encountered.

4. Explain data analysis procedures in sufficient detail to permit

interested readers to draw their own conclusions about key findings and results.

Describe the kinds of analyses conducted and, as appropriate, why these procedures were selected. It may make sense to discuss the analyses in greater detail in a technical appendix to the evaluation report.

5. Present all of the findings and results — both the positive and the negative.

Discuss all of the key findings about each evaluation question, whether the findings are positive or negative. Evaluation reports that present only positive results and/or gloss over or neglect negative findings have little or no credibility among readers and add little value to subsequent conversations about professional development plans, practices, policies, and funding. Most readers understand that professional development — especially professional development that involves large numbers of participants and that extend over long periods of time — rarely take place exactly as planned. Similarly, professional development does not always achieve its intended outcomes or achieves them partially or only among some participants.

Presenting evaluation results objectively and in a straightforward

manner helps readers understand what happened, what results were achieved, and why. Report also on any problems that affect the evaluation. For example, evaluation reports should be clear about problems such as low survey response rates that make it difficult to interpret survey results in meaningful ways. Similarly, if classroom observations or teacher interviews included as part of the evaluation design were not conducted as planned, discuss these problems and provide a clear explanation of how data collection problems or gaps in the data affected analysis and the confidence that readers should have in the evaluation findings.

While it is important to report negative findings and problems that may have affected evaluation results, it is equally important that reports not overemphasize the negative findings. To illustrate how a few words change the "meaning" of an evaluation finding, consider the examples of a description of survey results in the box below.

The first and third examples convey judgments about the findings and may reflect the evaluator's bias. The second example simply reports the finding. Both the first and third examples call for an explanation of what criteria, either implicit or explicit, led the evaluator to make such a judgment. Why is 25% of teachers either "scant" or "impressive?" The second example does not require an explanation, although the evaluator may choose to provide one in a summary or concluding section of the report.

In general, when an evaluation report presents judgments about the quality of professional development or about its impact or effectiveness, the report should also be clear about the criteria or standards used to make the judgment. For example, if the evaluation report concludes that the professional development did not achieve the intended results, the report should remind the reader what the expected outcomes were. Further, if the report attempts to explain why the

How a few words can redefine the evaluation findings

- A scant 25% of teachers who responded to the survey reported that they found the activity useful compared with other professional development that was available to them.
- Twenty-five percent of teachers who responded to the survey reported that they found the activity useful compared with other professional development that was available to them.
- An impressive 25% of teachers who responded to the survey reported that they found the activity useful compared to other professional development that was available to them.

professional development did not achieve the intended results, the report should be very clear about the extent to which the proffered explanations are based on findings from the evaluation, especially findings about implementation and participation, or the extent to which they are based on speculation.

6. Draw on key findings and conclusions to present actionable recommendations.

As students and observers of teacher professional development, especially when they are involved from the earliest stages of planning, evaluators are in a good position to make recommendations. Just as a good logic model provides a road map for an evaluation, thoughtful recommendations provide a road map for improving and expanding teacher professional learning opportunities. Useful recommendations anticipate steps readers are likely to be able to take and offer concrete suggestions for taking them. Provide a brief rationale for each recommendation, drawing on specific findings and conclusions. If it makes sense for the recommended action steps to occur in a particular order, explain the order. If challenges are likely with the recommended action steps, point them out and provide suggestions for overcoming them.

7. A final consideration: One evaluation report or several reports?

Comprehensive, long-term professional development activities and initiatives probably suggest the need for several reports. If the professional development includes several cycles of learning spread out over four to six months or longer, and if there are clearly defined interim benchmarks specified in the overall plan, prepare several reports. For example, if the professional development extends over two school years and teachers are expected to begin using new instructional practices during the first year, an interim report prepared over the summer between the first and second year of professional development could examine the first-year professional learning and initial implementation of new practices. A final report, which continues to track the professional development in the second year and examines ongoing changes in instruction, could be completed in the summer after the second year.

Preparing multiple evaluation reports has several advantages. First, interim reports can help providers and managers determine whether the professional development is taking place as planned and whether they appear to be achieving intended outcomes. Findings in these reports can also inform midcourse

corrections that increase the likelihood of achieving overall outcomes. Interim reports make it possible to provide information about results — albeit incomplete information — to policy makers and funders sooner. Depending on the circumstances, these results may help leverage additional resources for the professional development. To be sure, interim reports that indicate that the professional development is not proceeding smoothly or that it is not producing expected results could undermine support for the professional development. At the same time, knowing what does not work or does not contribute to improved practice is almost as important as knowing what does work.

Summary

Well-written evaluation reports, including interim reports and final reports, can inform decisions about whether to continue, expand, and/ or modify a professional development program or initiative. Evaluation findings and recommendations also can inform decisions about future initiatives, including decisions about the design and the resources necessary to ensure success.

Effective evaluation reports anticipate readers' interests and address these interests with clear descriptions of the professional development that

was evaluated, the approach to the evaluation, and evaluation findings and conclusions. Most evaluation reports also include recommendations that outline specific action steps related to the activity being evaluated and/ or related to future professional development. Effective evaluation reports are objective and candid. They describe what happened and, as appropriate, what did not happen. When the professional development was not implemented according to plans or did not achieve the intended outcomes, the evaluation report describes factors that may have contributed to incomplete implementation or that impeded successful attainment of the outcomes.

In a period of increasing accountability for quality professional development and for measurable and observable outcomes, weak evaluations and inadequate reports do not add value to the important conversations about next steps, and they can derail the conversations. In contrast, solid evaluations and articulate evaluation reports can influence both policy and practice in positive and constructive ways. The evaluation process can, in powerful ways, extend professional learning and reflection for teachers and others engaged in the work.

Appendix A

Resources for evaluating teacher professional development

The resources listed here provide conceptual models, guidance on developing instruments and conducting evaluations, and samples of data collection instruments (especially instruments for collecting various kinds of qualitative data). These resources should be considered a starter set; they by no means represent a comprehensive sample. In addition, as evaluation planners review the examples of instruments and data collection activities, they should recall the importance of tailoring the instruments and data collection activities to meet the needs of the evaluations that they are planning.

Administration on Children, Youth, and Families. (no date). The program manager's guide to evaluation. Washington, DC: U.S. Department of Health and Human Services. Available at www.acf.hhs.gov/programs/opre/other_ resrch/pm_guide_eval/reports/pmguide/ pmguide_toc.html.

This guide and a companion guide, The Head Start Bureau Evaluation Handbook, help program staff plan and conduct local evaluations. Both guides include tools to use in local program evaluations and explain how programs can use evaluation results to improve program design and services to children and their families.

Blank, R.K., de las Alas, N., & Smith, C. (2008, February). Does

teacher professional development have effects on teaching and learning? Analysis of evaluation findings from programs for mathematics and science teachers in 14 states. Washington, DC: Council of Chief State School Officers. Available at www. ccsso.org/content/pdfs/cross-state_study_ rpt_final.pdf.

This report examines findings from a number of evaluations of professional development for teachers across the country and provides extensive information about evaluation designs.

Council of Chief State School Officers & National Science Foundation. (2008, April). Bridging the gap between research & practice in professional development: Selected research and resources. Washington, DC: Authors.

A companion to the review of evaluation results, this report includes extensive lists of resources that are available for evaluating professional development, as well as information about locating these resources.

Dirr, P.J. (no date). Classroom observation protocols: Potential tools for measuring the impact of technology in the classroom (Policy and Planning Series #104). Alexandria, VA: Appalachian Technology in Education Consortium with support from the CNA Corporation. Available at www.eed.state. ak.us/edtech/pdf/ATEC-PP104Tools. pdf.

This report explains how to use various observation protocols to collect information on the impact of interventions in classrooms. The report also contains information about a number of well-designed protocols that can be used for this purpose, including their use in pre-/post-evaluation designs.

Elmore, R. (2007, April).

Professional networks and school improvement. The School Administrator, 4(64). Available at www.aasa. org/SchoolAdministratorArticle. aspx?id=6812.

This article describes how observations that yield descriptions rather than judgments are important in understanding classroom practice.

Frechtling, J., Frierson, H., Hood,

S., & Hughes, G. (2002, June). The 2002 user-friendly handbook for project evaluation. Washington, DC: The National Science Foundation. Available at www.nsf.gov/pubs/2002/nsf02057/ nsf02057.pdf.

This handbook explains various approaches to program evaluation in easy-to-understand language.

Guskey, T. (2000). Evaluating professional development. Thousand Oaks, CA: Corwin Press.

Prepared for the National Staff Development Council, this book describes five levels of professional development evaluations, explains how to conduct evaluations at each level, and describes the relative benefits of the results. The book also contains an exhaustive list of references to other resources for professional development.

Henry, M.A., Murray, K.S., & Phillips, K.A. (2007, November **30).** Meeting the challenge of STEM classroom observation in evaluating teacher development projects: A comparison of two widely used instruments. St. Louis, MO: M.A. Henry Consulting, LLC. Available at http://sirc.mspnet.org/index. cfm/14976.

This report discusses the challenges associated with using classroom observations in evaluating teacher professional development and offers concrete suggestions for overcoming

the challenges. It also reviews two observational tools, including their reliability and validity.

Killion, J. (2008). Assessing impact: Evaluating staff development (2nd ed.). Thousand Oaks, CA: Corwin Press & NSDC.

This guide is an excellent practical resource for planning and conducting evaluations of teacher professional development. It explains a variety of approaches to evaluations and includes a number of tools that are useful to both practitioners and evaluators. An accompanying CD provides specific suggestions for how to introduce the guide to various users.

Killion, J. & Harrison, C. (2006). Taking the lead: New roles for teachers and school-based coaches. Oxford, OH: NSDC.

This book, which focuses on the multifaceted role of school-based professional developers, includes detailed suggestions for evaluating their impact in schools and classrooms.

Killion, J. & Roy, P. (2009). *Becoming a learning school.* Oxford, OH: NSDC.

From setting the stage to engaging the community in understanding the purpose of collaborative professional learning teams, this volume covers what leaders need to know to implement more effective professional learning.

King, J.A., Morris, L.L., & Fitz-Gibbon, C.T. (1987). How to assess program implementation. Newbury Park, CA: Sage Publications.

Part of the nine-book Program Evaluation Kit, this small volume provides detailed guidance on how to plan and conduct evaluations of program implementation. Discussions of data collection and data analysis are especially helpful, and a number of sample data collection instruments are included that can be adapted for evaluations of teacher professional development.

Kirkpatrick, D. (1994). Evaluating training programs. San Francisco: Berrett-Koehler Publishers.

One of the classics on program evaluation, this book introduces the notion of various levels of evaluation of training programs and explains the uses of each level.

Maryland State Department of Education. (2008, November).

Maryland teacher professional development planning guide. Baltimore, MD: Author. Available at www.marylandpublicschools. org.

The guide describes the elements of an effective plan for teacher professional development and presents a six-step planning process.

McDonald, J.P., Mohr, N., Dichter, A., & McDonald, E.C. (2007). The power of protocols: An educator's guide

to better practice. New York: Teachers College Press.

The authors explain how carefully crafted protocols can be used to structure discourse about practice, to collect, organize, and analyze data, and to examine student work.

National Staff Development Council. (2001). NSDC's standards for staff development. Oxford, OH: Author.

Twelve standards define what is necessary if staff development is to impact student achievement. Each standard is accompanied by a two-page discussion that includes a rationale, case study, discussion questions, references, and next steps. Includes an assessment instrument, annotated bibliography, and suggestions for use.

Ontario Ministry of Education. (2007, September). Teacher moderation: Collaborative assessment of student work (The Literacy and Numeracy Secretariat). Toronto, Ontario: Author. Available at www.edu.gov.on.ca/eng/ literacynumeracy/inspire/research/ Teacher_Moderation.pdf.

This publication describes how teachers can work together to assess student work as part of larger efforts to understand and improve instruction. A 90-minute video illustrates various parts of the process.

Patton, M.Q. (1987). How to use qualitative methods in evaluation. Newbury Park, CA: Sage Publications.

Another in the Program Evaluation Kit, this book explains how qualitative methods can and should be used in evaluations. In addition to guidance on designing qualitative evaluations, it offers extensive guidance on conducting observations and interviews and analyzing qualitative data.

Puma, M. & Raphael, J. (2001).

Evaluating standards-based professional development for teachers: A handbook for practitioners. Washington, DC: The Urban Institute. Available at www.urban. org/publications/410432.html.

This detailed guide provides stepby-step directions for evaluating what the authors call standards-based teacher professional development. The guide also develops cases of two district evaluations to illustrate different approaches to evaluation.

Roy, P. (2007). *User's guide:* Innovation configurations for NSDC's standards for staff development. Oxford, OH: NSDC.

This user's guide explains what Innovation Configurations are and how to use them in planning staff development that meets NSDC's standards. The guide also explains how developing and using Innovation Configurations can help gauge progress in implementing high-quality professional development.

Singer, N.R. & Scollay, D. (2007).

Increasing student achievement in writing through teacher inquiry: An evaluation of professional development impact. Available at www.nwp.org/cs/public/download/ nwp_file/10561/Gateway_LSRI_ Cohort_II.pdf?x-r=pcfile_d.

This report is a good example of a rigorous local evaluation of teacher professional development in the area of writing instruction.

Taum, A.K.H. & Brandon, P.R. (2006, April 9). The iterative process of developing an inquiry science classroom observation protocol. Paper presented at the annual meeting of the American Educational Research Association, San Francisco. Available at www.hawaii.edu/ crdg/programs/documents/evaluation/ ISOCS_AERA_2006.pdf.

This essay offers clear guidance and examples for developing classroom observation protocols.

Whitney, A., Blau, S., Bright, A., Cabe, R., Dewar, T., Levin, J., Macias, R., & Rogers, P. (2006, April). Beyond strategies: Teacher practice, writing process, and the influence of inquiry. Available at www.nwp.org/cs/public/download/

nwp_file/11082/beyondstrategies.pdf?xr=pcfile_d.

Drawing on research funded by the Local Sites Initiative of the National Writing Project, this article reports on a small-scale case study comparing teaching practices of a teacher who participated in an inquiry-focused professional development activity with one who did not. In addition to finding positive results attributable to the professional development, the study and the report are good examples of teacher involvement in professional development research and evaluation.

W.K. Kellogg Foundation. (1998,

January). W.K. Kellogg Foundation evaluation handbook. Battle Creek, MI: Author. Available at www.wkkf.org/ knowledge-center/Resources-Page.aspx.

Long a leader in the field of program evaluation, the W.K. Kellogg Foundation published this guide to help program leaders and staff plan and conduct rigorous evaluations. The guide also includes case studies of how programs have used evaluation results to enhance program quality and outcomes.

Appendix B

Sample items for surveying participants' views of professional development

Planners should conduct their own searches for instruments and data collection strategies that may be appropriate for their evaluations. Use these and other search terms to locate helpful documents on the Internet.

- Looking at student work.
- Assessing/evaluating program impact.
- Measuring/assessing teacher knowledge (add a content area to the search terms).
- Evaluating training (and/or training programs).
- Program evaluation/impact evaluation.
- Logic model/theory of change. The following items can be adapted and used in surveys of participants' views of their professional learning.

1. Understanding the purpose of the professional development.

Sample item: Which of the following statements best describes the primary purpose of (insert the name of the professional development)? (Select one.)

The purpose of the professional development was:

- A. To communicate new ideas for me to consider using in my classroom.
- B. To provide an opportunity for me to learn from other teachers.
- C. To help me understand (insert content of professional development).
- D. To help me apply/implement (insert content of professional development or other descriptor) in my classroom.
- E. Not clear.
- F. Other (specify).

Note: In using this or a similar item, be sure that one response option includes the intended purpose of the professional development.

2. Ratings of the usefulness of key components of the professional development.

Sample item: Which of the following statements best describes the usefulness of (insert the name of the professional development or a specific component)? (Select one.)

- A. It was a good start.
- B. It was a good start, but I have a lot of questions.
- C. It was a good start, and I look forward to using the new ideas in my classroom.
- D. It provided everything I need to use the new ideas in my classroom.
- E. I don't think that these ideas will work very well in my classroom.
- F. It's too soon to tell.

3. Perceptions of the extent to which the professional development met participants' needs.

Sample item: Indicate the extent to which (insert the name of the professional development) met your professional learning needs. (Select one.)

- A. It addressed my professional learning needs completely.
- B. It addressed some of my professional learning needs.
- C. It did not address my professional learning needs.
- D. This professional development did not help much because I was already familiar with this topic.

4. Ratings of the alignment of the content of the professional development with improvement priorities.

Sample item: To what extent was (insert the name of the professional development) aligned with (school/district) (goals/priorities) for improving instruction? (Select one.)

- A. The professional development was <u>very closely</u> aligned with (*goals/priorities*) for instructional improvement.
- B. The professional development was <u>somewhat</u> aligned with *(goals/priorities)* for instructional improvement.
- C. The professional development was <u>not aligned</u> with *(goals/priorities)* for instructional improvement.
- D. The professional development was <u>inconsistent</u> with (*goals/priorities*) for instructional improvement.
- E. I don't know.

5. Perceptions of support and encouragement to participate in the professional development.

Sample item: Which of the following statements best describes the support that you received from your principal (or other school leader or school-based professional development staff) to participate in (insert the name of the professional development)? (Select one.)

- A. The principal strongly encouraged me to participate.
- B. The principal encouraged me to participate.
- C. The principal tried to discourage me from participating.
- D. I did not discuss the professional development with the principal prior to participating.

6. Perceptions of support and encouragement to apply new knowledge and skills.

Sample item: Which of the following statements best describes the support that you received from your principal to apply what you learned in (insert the name of the professional development) in your classroom? (Select one.)

- A. The principal has encouraged me to apply what I learned in my classroom.
- B. The principal has encouraged me to apply what I learned in my classroom and has offered to help.
- C. The principal has not encouraged me to apply what I learned in my classroom.
- D. I have not discussed what I learned with the principal.

Note: Additional items and responses can focus on encouragement from other school leaders, school-based professional development staff, and other teachers.

7. Ratings of the likelihood of applying new knowledge and skills in the classroom.

Sample item: Which of the following statement best describes the likelihood that you will apply what you learned in (insert the name of the professional development) in your classroom? (Select one.)

- A. I have already (practiced/applied) (skill/practice) in my classroom.
- B. I have already (practiced/applied) (skill/practice) in my classroom, and it seemed to work well.
- C. I have already (practiced/applied) (skill/practice) in my classroom, but it was not appropriate for my students.
- D. I look forward to (practicing/applying) (skill/practice) in my classroom in the next few weeks.
- E. I look forward to (practicing/applying) (skill/practice) in my classroom sometime later this year.
- F. I would like to (practice/apply) (skill/practice), but I don't have the materials that I
- G. I don't think that these things will work with my students.

8. Overall ratings of the usefulness of the professional development compared with other professional development.

Sample item: Which of the following statements best describes how (insert the name of the professional development) compares with other professional development in which you have participated during the past six months (or other period)? (Select one.)

- A. This professional development was more useful than other professional development that I have participated in.
- B. This professional development was <u>about the same</u> as other professional development that I have participated in.
- C. This professional development was <u>less useful</u> than other professional development that I have participated in.
- D. I don't have an opinion.
- E. I don't have an opinion because I haven't participated in any other professional development in the last six months.

Afterword

■ ffective professional learning requires evaluation for ✓ improvement and accountability. Evaluation provides information to strengthen professional learning and provide evidence for accountability. The National Staff Development Council emphasizes the importance of evaluation in its definition for professional learning and its standards.

NSDC's definition of professional development states: "(v) regularly assesses the effectiveness of the professional development in achieving identified learning goals, improving teaching, and assisting all students in meeting challenging state academic achievement standards."

The Evaluation standard of NSDC's Standards for Staff Development states, "Staff development that improves the learning of all students uses multiple sources of information to guide improvements and demonstrate its impact" (NSDC, 2001).

Because educators' experience and competence with evaluation is limited, they often are less willing to engage in it. NSDC is grateful to M. Bruce Haslam, Policy Studies Associates, and Colleen Seremet, assistant state superintendent for instruction in the Maryland State Department of Education, and the school district leaders in Maryland who contributed to the development of this practical resource guide to help in the effective evaluation of professional development. In particular, NSDC appreciates their spirit of collaboration and willingness to share this resource guide with other professional learning leaders.

As schools and districts strive to increase student achievement through building educators' capacity, evaluation becomes an essential element of the improvement process. As professional learning moves closer to the classroom, it is increasingly important for school leaders, school improvement teams, and teacher leaders to apply the strategies outlined in this guide to evaluate professional learning's effect on teaching and student learning. Central office staff members also are significant partners and resources to schools in their evaluation

work. Engaging in evaluation heightens the effectiveness of professional learning and its impact on teaching and student learning.

This guide and the many resources identified within it assist educators in conducting formal and informal evaluations of professional learning. After conducting evaluations, educators are encouraged to share the evaluation

results with professional development leaders. Evaluation elevates the value of professional learning and helps to expand the field and enrich practice so all teachers and students benefit.

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