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Using a Profiling Process to Insure Program Quality:

Volume I

A Self-Instruction Manual

Prepared for
The U.S. Department of Energy

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Using a Profiling Process to Insure Program Quality Volume I: *A Self-Instruction Manual*

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Introduction

Between 1990 and 1995 the U.S. Department of Energy (DOE) and the National Center for Improving Science Education (National Center) developed a system for ongoing evaluation of K-12 educational programs in the DOE-supported national energy Laboratories. As part of the formative evaluation component of this collaborative endeavor, field staff in the Laboratories began creating profiles of their programs. However, many individuals within DOE Headquarters were not familiar with this profiling process and were unprepared to use the valuable information that the profiles generated. This manual was produced to orient Headquarters staff to profiling. It focuses on how Headquarters staff can use the profiling process to help their funded programs establish and/or maintain high quality. Its purpose, then, is not to train Headquarters staff to become proficient in profiling, but to show them how to draw on the Laboratories' use of profiling to bring about program improvement.

Profiling is the process of systematically examining and describing a program's elements against a set of components that define Effective Practice. The instrument used to capture the data for analysis is called a template, and most of this manual focuses on the templates and how to read and interpret them. However, since it is important to understand these data in context, we also describe what should accompany each template in a complete profiling packet and offer guidelines for reviewing complete packets and providing feedback to program managers.

While this manual was produced for the staff at DOE Headquarters, we hope it will be useful to other federal agency personnel and other federal sponsors of educational programs in science, mathematics, and technology. The more the staff at an agency understand the programs they fund, the better they can insure that their agency's priorities are being met and that the programs establish and maintain high quality.

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Organization and Use of This Manual

This self-instruction manual is divided into two volumes. The first (the manual itself) contains the background material on profiling and the self-instruction learning activities. The second (supporting materials for the manual) contains all of the documents that you need for completing the activities as well as the answers to all the exercises and questions in Volume I.

Organization of this Manual

Volume I contains five chapters:

1. *Profiling - The Process and the Instrument*

In this chapter you'll learn how profiling was developed and how the instrument called a template is constructed. You'll also learn about the different ways profiling can be used and its advantages and disadvantages.

2. *Getting Acquainted with Program Templates*

This chapter provides a way to help you understand the components of each of four templates: the Teacher Development Template, the Teacher Research Participation Template, the Template for Student Programs, and the Template for Local and Regional Systemic Efforts.

3. *Reading and Interpreting Templates*

Here you'll learn what constitutes a profiling packet and how to read and interpret a template from a program oversight perspective. Using a set of guidelines, you'll review and critique sections of actual templates.

4. *Using the Template to Insure Program Quality*

Profiling is worthwhile only if the information obtained can be used to establish and maintain quality programs. The material in this chapter can help you learn how to insure the quality of programs whose effectiveness has already been validated.

5. *The 25 Most Commonly Asked Questions about Profiling*

The 25 most commonly asked questions and their answers serve as a summary of the material in this manual. Some of the questions anticipate situations you may encounter when you start using profiling.

Volume II contains seven appendices:

A. *Answers to Exercises*

This appendix provides the answers to all of the exercises of Volume I.

B. *Templates*

Here you will find the most recent version of the templates for the four types of programs. You will also find references and operational definitions for each template. These templates may differ slightly in sequence and wording from the ones you find in the exercises. That is because examples in this manual are taken from actual completed templates. Based on the experience of pilot and early users, the templates have been revised.

C. *Guidelines for Reviewing Profiling Packets*

This document is an aid for reviewing templates and profiling packets. It has two parts. Part A applies to all templates; part B is specific to each template type and addresses each component of the template. Use this document to guide your review process.

D. *A Complete Profiling Packet*

Included here is an actual complete profiling packet with brochure, template, report, and activities schedule.

E. *Guidelines for the Trainer*

Although individuals can work through Volume I at their own speed, greater learning will occur from interaction with others. To encourage group use, in this section we've included suggestions on involving others as you use the Self-Instruction Manual.

F. *Resources Related to Profiling*

This appendix includes references to pilot studies and summary reports describing the development of profiling. Also cited are other publications related to effective science programming and formative and summative evaluation of programs that support mathematics, science, and technology education.

Use of This Manual

This manual can be used in three different ways:

- Individuals desiring to understand profiling may select the most relevant sections and work through the activities entirely on their own.
- A small group of people can work together to complete the activities.
- Someone already knowledgeable about profiling can use the activities in this manual to design a session for training others.

If you are an individual using this manual, here's what you do:

1. Decide what you want to learn about profiling (perhaps understanding profiling in general and, specifically, the Teacher Development Template).
2. Review the Table of Contents of the manual to determine the sections most relevant to your needs. (Those would probably be the background material in Chapter 1; the exercise, Getting Acquainted with the Template for Teacher Development Programs, in Chapter 2; and the analysis exercise for the Teacher Development Template in Chapter 3. Depending on your needs, you might also be interested in the information on using the templates to insure program quality in Chapter 4.)
3. Work through each of the sections you have selected, completing the exercises and checking your answers. You may also want to check out your perspectives with and/or pose questions to someone who has actually done profiling. These individuals can be an excellent resource to someone just getting started.
4. To verify your learning, obtain an actual template and review it using the Guidelines for Reviewing Profiling Packets (Appendix C, Vol. II) in the manual. Use this exercise to assess how much you've learned and what you still want to know.

Self-instruction manuals have inherent advantages and disadvantages. They can be pulled off the shelf and are available for instant learning. The manual in and of itself is a complete learning package. On the other hand, individuals need a strong motivation to sit down with a self-instruction manual and work through lessons on their own. Being required to use profiling in their work or having to compensate for missing an orientation session on the profiling process may be strong enough to support people acquiring the knowledge on their own. A desire to learn something about profiling is generally not a strong enough motivator.

If you doubt your ability to persevere, try to form a small group of individuals who want to learn about profiling. That way you can support one another in your efforts. The guidelines in Volume II, Appendix F will help you.

1. Profiling — The Process and the Instrument

Pre-Test:

What's Important to Know About Profiling and Templates?

Perhaps you've had firsthand experience with profiling. Or maybe you've just heard of the process. The following questions serve as advanced organizers to alert you to the material that will be covered.

Answer the questions to get a sense of where to focus your attention. Although all the answers can be found by reading the next section, an answer key is provided in Appendix A of Volume II.

1. Profiling as a methodology is a new technique.
True False
2. Development of the instrumentation called "templates" was done specifically for the Department of Energy's education programs.
True False
3. Templates can provide useful information for making decisions about expanding or curtailing programs when resources are shrinking.
True False
4. Which of the following questions will a properly completed template answer?
 - a. What is the impact of the program on participants?
 - b. To what extent is the program designed to reflect Effective Practice?
 - c. To what extent is the program's design actually carried out?
 - d. Items b and c only.
 - e. Items a, b, and c.
5. The extent to which research is incorporated into each template is consistent across the various instruments.
True False
6. Which of the following people should be interviewed in gathering data to complete the Actual Program column of a template?
 - a. Program managers
 - b. Program participants
 - c. People providing oversight
 - d. Items a and c.
 - e. Items a, b, and c.

Pre-Test Exercise, Page two

7. Getting conflicting data in interviews rarely happens.
True False
8. Templates are used for formative evaluation more than for summative evaluation.
True False
9. Although templates are helpful tools, they are not precise enough to be used for accountability purposes.
True False
10. Templates are program specific, that is, every program has to have a template specifically designed for its individual components.
True False
11. The key element of a template is the Components of Effective Practice column.
True False
12. There are usually many different ways that program planners can incorporate components of Effective Practice into their programs.
True False
13. The Intended Program column needs to be completed before a program cycle begins.
True False
14. Which would be the best intended response for an Effective Practice item that says that the program "creates a collegial atmosphere"?
 - a. Teachers invite scientists to a pot-luck at the end of the summer institute.
 - b. Teachers and scientists work together to solve a problem; each has a specific role to play.
 - c. Teachers live together in a dormitory.
 - d. All of the above.
15. It's possible to "cheat" on a template.
True False

Overview of Profiling

Purpose of Profiling

For many years, educators have made significant investments of time, energy, and resources in a wide variety of programs that aim to improve education. How good are these programs? Are the resources being invested wisely? What adjustments could be made to better use the available resources? And, as resources shrink, where should cuts be made?

These questions are especially compelling to educators concerned about the wise use of limited resources. Yet in order to address these important questions, a more basic question must be answered: *What is actually going on in these programs?* Without the answer to this question, it is impossible to know what is causing positive or negative learning outcomes. Likewise, it is impossible to know what to change in order to improve a program.

Profiling addresses the basic question of what is happening in a program. Profiling is a systematic process of using templates to describe and evaluate key components of programs, specifically in this case, the U.S. Department of Energy's (DOE) programs to improve precollege mathematics and science education. Gathering, analyzing, interpreting, and using program data is profiling. The instrument used in this process is the template. The process was developed primarily for formative evaluation — ongoing assessment of a program that enables planners and managers to identify needs and change strategies throughout the life of the program. Other processes and instruments are normally used for summative evaluation of a program, i.e., for determining the results or impact.

Development of Templates

Since its inception in 1990, the profiling program has been a three-way collaboration among DOE Headquarters, the national energy Laboratories, and the National Center for Improving Science Education (National Center). The templates themselves have been developed collaboratively, with the National Center playing a lead role and with the full participation of precollege educational program managers and staff from DOE national Laboratories and other facilities.

The profiling process traces its origins back 15 years to work done at the University of Texas' Research and Development Center for Teacher Education. The methodology was further refined over the years,

including a major change incorporated in the DOE templates: the addition of Components of Effective Practice, which enables people to compare their programs to strategies and characteristics of similar programs that have been found to be effective. Addressing the question, *To what extent does the program's design and operation reflect Effective Practice?* helps program developers, program managers, and those who provide oversight identify specific components of their programs that can be improved.

Because there is such a wide variety of DOE educational programs, more than one template is needed to capture the programs' important features. The programs have been grouped into four categories, and a template has been developed for each category:

1. Teacher Development Programs

These programs are usually workshops, institutes, and other opportunities for teachers to develop new knowledge and learn strategies to improve their science, mathematics, and technology teaching.

2. Teacher Research Participation Programs

In these programs secondary school teachers typically spend a summer in a Laboratory setting, conducting research as part of a team.

3. Student Programs

Student programs vary widely, including enrichment programs for high school students, science camps for younger students, and programs in which students join research teams to conduct research.

4. Systemic Programs (Local and Regional Systemic Efforts)

In systemic programs the Laboratory works collaboratively with a state, district, region, or school to improve critical elements of the science and mathematics education system.

The process for developing the templates for these programs began with searching and reading the literature on the particular program types, focusing especially on what research, evaluation studies, and experience indicated were components necessary for such programs to be effective. Small groups of staff from the three organizations studied and discussed readings to identify components of Effective Practice, components essential for a successful program. Staff from the National Center combined the work of these groups into draft templates and circulated the templates for review. The draft templates

were also piloted in several locations. After recommendations from the pilot sites were incorporated into the final templates, all the Laboratories began using the templates to profile their own programs. Final templates reflect feedback from the Laboratories using them over time. A sample page from the Teacher Development Template can be found on the next page. Volume II, Appendix B includes the most recent version of all four templates.

It is important to note that some of the program types have not been studied carefully to date, so some components on the templates are based primarily on the experience of program staff. Specifically, there is a large literature and research base for teacher development programs. However, there is little research and documentation of teacher research participation programs, and what exists is limited in scope. Use of the templates is an opportunity to add to the knowledge base on Effective Practice. Some template components, especially on templates other than teacher development, were actually being tested for their effectiveness during the pilot test and subsequent use.

TEMPLATE FOR TEACHER DEVELOPMENT PROGRAMS

Sample Component

<p><u>Component for Effective Practice</u></p>	<p><u>Intended Program</u></p>	<p><u>Actual Program</u></p>
<p>1. Vision for the Teacher's classroom (promoted by the program)</p> <ul style="list-style-type: none"> a. The content of teaching and learning is: <ul style="list-style-type: none"> • big ideas in science • scientific attitudes, and • scientific skills b. The process of teaching and learning is a "hands-on/minds-on" instructional approach that includes student investigation, discovery, and application of relevant science c. Teacher's primary roles are facilitator, coach, mediator d. Teaching and learning are cooperative and collaborative e. Teachers use materials, strategies, and perspectives sensitive to diverse <ul style="list-style-type: none"> • cultures, • languages, • genders, and • learning styles f. Teachers and students engage in ongoing, authentic assessment of important learning outcomes g. other 	<p>What does the program envision for the teacher's classroom?</p>	<p>What do participants perceive to be the program's vision for their classroom?</p>

Gathering Data to Complete Templates

Profiling can be done many ways, depending on the situation and the primary purpose. When the purpose is formative evaluation, selected program staff will normally complete the template by filling in the Intended column themselves before their program cycle begins. Then toward the end of the program they will gather data to complete the Actual column. An external evaluator, data collectors, or staff not involved in the program can also complete the template, especially filling in the Actual column. In each case, data should be gathered from program staff and participants.

Data are collected from people in every role (e.g., program staff, teacher participants, mentors, students, other key participants) and from more than one person in each role. The more people who provide data, the richer the picture.

There are no structured protocols for gathering data. We recommend an interview procedure, where data collectors are guided by the information they need for completing the template. Interviews, observations, and document analysis are all used as sources of information. The four booklets explaining how to complete the templates — *Profiling Teacher Development Programs*, *Profiling Teacher Research Participation Programs*, *Profiling Student Programs*, and *Profiling Local and Regional Systemic Efforts* — include a set of guidelines as well as a sample interview protocol, illustrating the open-ended nature of a typical interview. (See Appendix G.) Although interviews are the primary data source, observations of the program in action as well as a review of program documents (e.g., brochures and reports), are additional sources of information.

Analyzing and Interpreting Template Data

A completed template describes the program as it was designed and as it is actually carried out. Conflicting data (e.g., when different people's reports of a given component vary) are noted on the template. The best template entries are rich in descriptive information. With such information, the following questions can be answered, primarily through comparing columns on the template:

- To what extent is the program designed to reflect Effective Practice?
- To what extent does the program in place reflect Effective Practice?
- To what extent is the program's design actually carried out?
- What changes should be considered in the program, given its goals and constraints?

Advantages and Disadvantages of Profiling

As with any methodology, there are advantages and disadvantages in profiling.

As discussed previously, profiling provides answers to key questions on program design and improvement; information for accountability; and, in part, data to improve, expand, or cut back on a program. It can also be used as a program planning and design tool.

But there are some disadvantages, too. Unless profilers have evaluation background or experience, chances are they will need training in order to complete the instrument. Profiling requires a substantial investment of resources, including time. Also, each template is specific to a particular type of program (e.g., Teacher Research Participation) and may not be appropriate for a different program type.

Sometimes it is possible to adapt a template so that it can fit a slightly different type of program. In other cases, developing a new template altogether is necessary. Making these decisions requires a certain level of knowledge and skill to know if adaptation is appropriate.

Note that the disadvantages apply to a level of commitment one has to make to profiling so that it becomes a useful process. There are no quick evaluation fixes. Profiling is a valuable process, but it does require a significant investment of time and resources.

Anatomy of a Template

The purpose of this section is to help you understand:

- How templates are constructed;
- What templates are designed to do;
- Where the profiling process and the templates came from; and
- How they are most effectively used.

Definitions

We'll begin with a couple of definitions. First, a template is an assessment tool used for formative evaluation of educational programs. It can also be useful for program design. It consists of three columns (see sample on page seven): "Components of Effective Practice," "Intended Program," and "Actual Program." Its foundation, the first column, lists elements of Effective Practice called "components" followed by subelements called "items." These components and items were identified

through research and the long-term experience of practitioners. The second column records what the program planners envision or intend to implement. The third column then asks what actually is happening in the program. The data are analyzed by looking at the extent of agreement among the three columns.

Exercise

Constructing a Template

Let's construct a template using personal information that we all know and understand. Here's the context: You want to construct a template describing what it takes for you to be an effective adult. This template will have a number of different components based on the various roles you have. Think about your roles for a minute and jot some of them down on a piece of paper.

You probably included roles such as parent, spouse or other family member, friend/colleague, or worker. Surely a number of characteristics come to mind about what it means to be a good parent, an effective worker, or a devout church member. Some of these roles and the characteristics associated with them are actually based in research (e.g., research studies have identified that one of the characteristics of being a good parent is reading to your child). Other characteristics are based more on personal preference, e.g., home schooling your children rather than sending them to a public or private school.

Another component for your template for being an effective adult is "Taking good care of yourself." Jot down some of the things you do — or should be doing — to take good care of yourself. Examples include eating nutritious meals, getting the right amount of rest and relaxation, and exercising regularly. Focus on the essentials — not personal preferences.

Using this component of taking good care of yourself, let's actually generate a few items for a template. See sample on next two pages.

Let's start with the counsel, "Eat nutritious meals." Is this advice based on research, the longtime experience of people who do or don't eat nutritious meals, or personal preference?

Yes, this is based on research that has documented the value of eating balanced meals as well as on a lot of experience as to what happens to people when they don't.

Therefore, in the left hand column, Components of Effective Practice, you can list the component, "Taking good care of yourself," and under it the item "Eat nutritious meals." Let's start with breakfast. Now there are a variety of nutritious breakfasts that one might have. Decide what a nutritious breakfast means to you and write it in the Intended Program column. Here are a couple of examples:

Construct a Template Exercise: Template for Being an Effective Adult — Sample

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
<p>1. taking good care of yourself</p> <p>a. eat nutritious meals</p> <p>b. getting adequate rest and relaxation</p> <p>c. getting adequate exercise</p>	<p>a. breakfast:</p> <ul style="list-style-type: none"> • bowl of bran flakes with banana and skim milk • 2 slices whole wheat toast with butter • tea <p>or</p> <ul style="list-style-type: none"> • toasted bagel with reduced fat cream cheese and jam • ½ honeydew melon • coffee <p>b. rest</p> <ul style="list-style-type: none"> • sleep seven hours on a moderately firm mattress • wake up no more than once • have the window open <p>c. exercise</p>	<p>a. breakfast:</p> <ul style="list-style-type: none"> • bowl of bran cereal with fresh strawberries • 2 slices of rye toast with butter and jelly • decaf coffee <p>or was it...</p> <ul style="list-style-type: none"> • jelly doughnut • coffee with 2 packs sugar <p>or was it...</p> <ul style="list-style-type: none"> • fried egg and sausage sandwich on a biscuit • was it... • nothing <p>b. rest</p> <ul style="list-style-type: none"> • slept 8½ hours on a moderately firm mattress • did not wake up at all • soft breeze from outside <p>or was it...</p> <ul style="list-style-type: none"> • slept five hours • awakened 3 times by thunder • got up to close window <p>c. exercise</p>

- A bowl of bran flakes with banana and skim milk; two slices of whole wheat toast with butter; and tea, or
- A toasted bagel with reduced-fat cream cheese and jam; half a honeydew melon; and coffee

Now let's assume that you've gotten your morning off to a pretty good start and have come close to eating what you intended to eat. Therefore, in your Actual Program column you might write something like this:

- A bowl of bran cereal with fresh strawberries; two slices of rye toast with butter and jelly; and decaffeinated coffee

On the other hand, if you got up late, ignored your intended breakfast, and simply picked up something on the way to work, you might write in the Actual Program column something like this:

- A jelly doughnut and coffee with two packets of sugar
- A fried egg and sausage sandwich on a biscuit
- Nothing

Which breakfast most closely matches your intended and the Effective Practice component?

Let's work through one more example. Another item under "Taking good care of yourself" can be "Getting adequate rest and relaxation." Again, what is this item based on: research, experience, or personal preference?

Yes, there's quite a bit of research about the need for adequate rest and relaxation. However, you may define "adequate" differently from others. What will you put in the Intended Program column for getting a good night's sleep? What is your version of a good night's sleep? Here's one possibility:

- Sleeping seven hours on a moderately firm mattress; waking up no more than once during the night; having the window open

What might go in your Actual Program column if you met or came close to meeting what's listed in the Intended Program column? It might look like this:

- Slept eight and a half hours on a moderately firm mattress; did not wake up during the night at all; soft breeze blew in from outside

Note here you've actually exceeded what you intended and certainly met Effective Practice. Also, note that you've added a personal preference — the soft breeze.

But not all nights are as good as that one. Describe what a bad night might look like. Maybe something like this:

- Slept five hours; was awakened three times by thunder; got up to close window

Here you've definitely not met either your intended action nor Effective Practice.

Now you try it. See page 12 and develop an item on “getting adequate exercise.” Complete the Intended and Actual columns. This completes the component “Taking good care of yourself.” By adding other items that focus on your role at work, as a family member, and in the community, you will have the components for a template entitled “Being an Effective Adult.”

Completing and Using a Template

Now that you have your own template, let's look at some other ways to gather data to complete the Actual Program column and for what purposes.

After you have filled out the first two columns, how would you gather data for the third column? As you did above, you could fill out the Actual Program column on your own, perhaps each day or at some other regular time. You could ask your spouse (or other trusted person) for feedback. You could have several other people complete the template for you to see if their perceptions agree with yours.

Once you have the third column completed, you can use this template as a self-monitoring device, a way of determining areas for improvement, a means of spotting patterns, or in a variety of other ways.

Note that the focus here has been on self-improvement. But let's change that for a minute. Suppose your manager handed you the template, instructing you to complete the Intended and Actual Program columns. Moreover, you're to solicit others for their views on your performance and then return a completed template to him or her with a plan for improvement attached. Ugh! Just a few things have changed. What concerns does this scenario raise for you?

You may be worried about how your manager might use the data. And what about getting data from your co-workers, especially that one person you just don't get along with? And how honest can or should you be? How trustworthy is your manager? What kind of relationship do the two of you have?

A comparison of these two scenarios points out some basic facts about the process of profiling using a template. The process is primarily for formative evaluation. Therefore, the people who have designed and implemented the program should be the ones who gather and interpret the data. They may ask for some outside help, but they're the ones who have ownership in the program and who are in charge. They are asking these kinds of questions:

- To what extent does the program design reflect *Effective Practice*?
- To what extent are program components actually implemented?

- To what extent does what is happening in the program reflect Effective Practice?
- What changes should be considered in the program, given its goals and constraints?

Program staff need to undertake profiling in an atmosphere of trust and honesty. They should view it as a learning activity to secure data that will answer the above questions and provide the raw material for making decisions on improving the program.

(NB: There are some circumstances under which the template can be used by external evaluators for summative evaluation, but these are highly context-specific and are beyond the scope of this discussion.)

“Good” and “Bad” Templates

What happens if program staff are forced to profile their program, are fearful of how the data will be used, and thus are resistant to the process? They'll adhere to the letter of the process but not the spirit, and that attitude is almost always reflected in the template. Consider two different responses to an item on the template you just built:

For "Getting adequate exercise each day," here's how the Intended Program and Actual Program read for two different templates.

<i>Intended Program:</i>	Get 30 minutes of exercise at the gym each day
<i>Actual Program:</i>	Went to the gym.
<i>Intended Program:</i>	Exercise at the gym for one hour, six out of seven days/week. This includes 30 minutes on the treadmill at four-five mph. The other 30 minutes will be devoted to weight work.
<i>Actual Program:</i>	Exercised five out of seven days. Time per day ranged from 50 to 75 minutes for an average of one hour. Treadmill speed was four miles per hour. Weight work (a mix of free weights and machines) involved lower body one day, upper body the next.

Look at the ways in which these two responses differ (e.g., tone and quality of response reflected in detail). Such differences commonly appear in templates that are completed because the program staff are genuinely interested in knowing what is happening in their program and how to improve it versus those who may be completing the template under less than ideal circumstances.

Post-Test:

What's Important to Know about Profiling and Templates?

So what have we covered so far? Items in this post-test remind you of the important aspects of profiling and templates. Answers are in the text on the preceding pages and also listed in Volume II, Appendix A.

1. Profiling consists of the methodology and the templates used for describing educational programs.
True False
2. The components of Effective Practice come from:
 - a) research and evaluation studies
 - b) the experience of seasoned practitioners
 - c) both of the above
3. A template is used primarily for summative evaluation.
True False
4. One can gather data for completing the Actual Program column by interviewing:
 - a) program participants
 - b) program staff
 - c) individuals providing oversight
 - d) all of the above
5. Program managers may not be honest in completing a template if they believe that the data will be used against them.
True False
6. Profiling methodology can be used to (choose all that apply):
 - a. align a program's design and implementation with best practice
 - b. document what actually happened in program implementation
 - c. make decisions about where program implementation needs to be changed or improved
 - d. determine the worth of program activities
7. A template is an instrument used in the program profiling process.
True False

Post-Test Exercise (page 2)

8. The three columns of a template are:

9. Which completed column comes with the template?

10. Templates exist for which of the following types of programs:

- ____ Teacher Development Programs
- ____ Educational Technology Programs
- ____ Systemic Programs
- ____ Teacher Research Participation Programs
- ____ Student Programs

11. Filling out the Actual Program column of a template is most effectively done by a single person who knows the program well and has been integrally involved in its operation.

True False

12. Interviews, observations, and document analysis are all useful ways to get information to complete templates.

True False

13. As a process for program development, implementation, and evaluation, profiling can be helpful in any situation where program quality and monitoring are important.

True False

14. People with program monitoring or funding/accountability responsibilities are likely to use templates in different ways from those who are directing and implementing programs.

True False

15. From a monitor's or funder's point of view, profiling is a way to help insure program quality.

True False

16. While developed specifically for the Department of Energy's education programs, profiling and the template, appropriately adapted, have application beyond DOE programs.

True False

2. Getting Acquainted with Program Templates

Overview

Which of the four templates are you most interested in? What are its component parts? This chapter of the manual allows you to delve into the template of your choice to learn about its components of Effective Practice.

Before we do that, however, here is a brief overview of the templates — just in case you're not sure which one you want to explore first.

1. The Teacher Development Programs Template

This template is designed for teacher development programs. It has been used extensively within the DOE community to profile a variety of teacher development programs for teachers of all grade levels. It is the template with the greatest body of research behind it. See page 23 for an introduction to this template.

2. Teacher Research Participation Programs Template

This template is designed for programs that provide teachers an intensive research experience in a research facility. It, too, has been widely used in the DOE community with the TRAC (Teacher Research Associates) Program. See page 25 for an introduction to this template.

3. Student Programs Template

This template is designed for Laboratory programs for students (elementary through high school). These programs take place in Laboratory facilities, on college campuses or other off-site locations, or in the students' schools. It has been used less than other templates only because DOE supports fewer on-site programs for students than for teachers. See page 27 for an introduction to this template.

4. Systemic Programs (Local and Regional Systemic Efforts) Template

This template is specifically designed for profiling systemic endeavors on a local or regional basis. Because systemic programs are new and the literature base is thin, this template uses a slightly different format than the other three templates. It is also more difficult than the others because of

the complexity of systemic endeavors involving multiple partners. Since DOE Laboratories are new to the systemic efforts arena, this template has had limited use. See page 29 for an introduction to this template.

In selecting a template to learn about, consider the following:

- Are the programs for which you're responsible using one particular template right now?
- What types of programs have you had the most experience with and know most about?
- In the hierarchy of templates (if indeed there is one), the Teacher Development Template and the Template for Student Programs are simpler than the other two.

In other words, we recommend starting with the type of program you know something about and/or that is likely to be easier, and then move into more complex and unfamiliar ones.

For your reference, operational definitions for terms used in each of the templates can be found in Volume II, Appendix E. The terms defined may relate to concepts, practices, or ideas that are new or have special meaning in the context of one of these programs.

For those who review templates as a part of their job, we've included in Appendix C of Volume II a set of guidelines for reviewing templates and profiling packets. We also discuss these guidelines in Chapter 3 of Volume I.

Both the operational definitions and the guidelines for reviewing templates can help you in completing the getting acquainted exercises.

Exercise

Getting Acquainted with the Template for Teacher Development Programs

This exercise is designed to help you become more familiar with the Teacher Development Template. Turn now to this template in Volume II, Appendix B. Referencing the template and the Operational Definitions, answer the following questions on a separate sheet; then compare your answers with those in Volume II, Appendix A, page A-5.

1. This template contains eight components (beginning on its second page). List them on a sheet of paper for easy reference. Describe what the template as a whole captures. What is the function of the cover page and demographics sheet (last page)?
2. Review the items under the component, Vision for the Teacher's Classroom and the Operational Definitions. Describe what an elementary, middle school, or high school science lesson might look like if all the items of this component of Effective Practice were in place.
3. An effective Teacher Development Program should be reflexive, that is, it should reflect in its own program just what it advocates that teachers do. Describe a typical day in a Teacher Development Program if it were to reflect all the items of Effective Practice listed under Teacher Development Program Activities.
4. A number of groups and organizations conduct teacher enhancement programs. What places a national Laboratory in a unique position to do so?
5. We know from research that one-shot workshops do not produce classroom change. How do the items under Follow-up address this reality?
6. How does the Teacher Development Template view teacher leadership? What factors control the extent to which a teacher can lead in the areas mentioned in Component 5?
7. How can a Teacher Development Program be part of a larger systemic effort?

8. Some of the items listed under The Systemic Connections Component are an extension of those under Follow-up. Explain.
9. The items under Program Administration are fairly standard for managing a project. Compare these items to something that you are familiar with. What's similar? Different?
10. The Program Evaluation component covers three major areas of evaluation: monitoring, formative, and summative. Distinguish among those three areas and relate them to the individual items listed.

Exercise

Getting Acquainted with the Template for Teacher Research Participation Programs

This activity will familiarize you with the Teacher Research Participation Template. Turn now to this template in Volume II, Appendix B. Referencing the template and the Operational Definitions, answer the following questions on a separate sheet; then compare your answers with those in Volume II, Appendix A, page A-9.

1. Following the cover sheet, the Teacher Research Participation Template has nine components. List them on a sheet of paper for easy reference. What is this template capturing? What is the function of the cover page and demographics sheet (last page)?
2. The essence of this program is the teacher's research experience. Looking at the items under the first component, what might a teacher's day in a Laboratory facility look like?
3. Imagine that you were going to spend several weeks working in a Laboratory. What would be important to you in terms of the following: where you were placed and what you would be doing, the scientist who would be your sponsor or mentor, and the type of preparation you would need prior to coming to the Laboratory and in your early days there? Compare your expectations with the items listed in the components on Teacher Assignments, Mentor Assignments and Role, and Preparation. What's the same? Different? Did you omit something? Is there something on your list that isn't included as an item of Effective Practice?
4. If you were part of a group spending several weeks at a Laboratory, what besides your individual assignment might be important to you? Compare your answers to the items under Broader Lab-Related Experiences.
5. The Teacher Research Participation Program is a national program in that it recruits teachers from across the country. It focuses on providing teachers with an intense research experience in cutting-edge scientific research. As a result, helping teachers implement their new learnings when they go back to their classrooms is, at best, challenging and, at worst, largely impractical. What follow-up

Getting Acquainted with the Template for Teacher Research Participation Programs Exercise (page 2)

steps can a Laboratory take to support teachers in a national program on their return to the classroom?

6. How might a Teacher Research Participation Program be part of a larger systemic effort?
7. Program administration of a Teacher Research Participation Program includes managing teacher/mentor assignments. What management issues does that relationship generate?
8. The Program Evaluation component covers three major areas of evaluation: monitoring, formative, and summative. Distinguish among those three areas and relate them to the individual items listed.

Exercise

Getting Acquainted with the Template for Student Programs

This exercise is designed to help you become more familiar with the Template for Student Programs. Turn now to this template in Volume II, Appendix B. Referencing the template and the Operational Definitions, answer the following questions on a separate sheet; then compare your answers with those in Volume II, Appendix A, page A-13.

1. There are nine components in this template. List them on a sheet of paper for easy reference. Describe what the template captures. Which two components contain the items that relate to why a Laboratory, in contrast to other institutions, is offering a program to students? What is the function of the cover page and the demographics sheet (last page)?
2. According to Effective Practice, what are the key items in designing a program for students?
3. How do you think students should be recruited? What might a group of students look like if the criteria for selection were followed?
4. If your child were to enroll in a science education program away from your immediate community, what would you want to know? What would you want your child to know? Compare your answers with the items listed in the component under Preparation.
5. What might a typical day look like for a student if it incorporated all the items listed under Program Activities? How do students go about doing their work? How and for what purpose are the students assessed?
6. How can a Laboratory use its facilities in conducting a program for students (see Component 5)?
7. According to the items under Follow-up, who has the responsibility for helping students maintain and maximize their learnings? What factors help or hinder the follow-up effort?

Getting Acquainted with the Template for Student Programs Exercise (page 2)

8. How can a student program be part of a larger systemic effort? Who might be leading such an effort?
9. The items listed under Part B of the Systemic Connections Component are an extension of those under Follow-Up. Explain.
10. How can a student program involve parents?
11. The Program Evaluation component covers three major areas of evaluation: monitoring, formative, and summative. Distinguish among those three areas and relate them to the individual items listed.

Exercise

Getting Acquainted with the Template for Local and Regional Systemic Efforts

The following exercise is designed to help you become familiar with the Template for Local and Regional Systemic Efforts. This template would be used with local and regional systemic initiatives in which a Laboratory is a key partner. Turn now to this template in Volume II, Appendix B. Referencing the template and the Operational Definitions, answer the following questions on a separate sheet; then compare your answers with those in Volume II, Appendix A, page A-17.

1. How is the format of this template different from the three other templates discussed in this chapter?
2. Why do you think the format is different?
3. The Local and Regional Systemic Efforts Template has 11 components. List them on a sheet of paper for easy reference. What do they tell you about the nature of a systemic program? What is the function of the cover page and demographics sheet (last page)?
4. The developers deliberately placed "vision" at the beginning of the template. Why do you think they did that?
5. Think back to some partnerships you've been involved in, such as a business venture or a food or baby-sitting co-op. List some of the characteristics of an effective partnership. Then compare your list with the items under Nature of the Partnership. How do the two lists compare?
6. Every systemic initiative will have a strategy or strategies for bringing about the desired change. The component Direct Delivery Interventions tries to capture this. What might be some direct strategies for bringing about change?
7. In order for systems change to occur, policies and procedures must be adjusted. What are some of the policies and procedures that might need to be changed in a large-scale initiative to reform science and/or mathematics education?

Getting Acquainted with the Template for Local and Regional Systemic Efforts Exercise (page 2)

8. The component Unique Contribution of the Laboratory calls only for description of the practice.
Why do you think that is so?
9. What does alignment of educational programs mean?
10. What are the various elements of equity that Component 7 asks program staff to address?
11. Some partners may not take a major role in garnering public support. Why do you think that is?
What is appropriate for an organization, such as a government Laboratory, in this arena?
12. Laboratories or other major stakeholders may not have taken a leadership role in system capacity building. Whose job is that? What's appropriate for the Laboratories or other major stakeholders?
13. What makes evaluation more complex in a systemic setting?
14. What's involved in effective program management? Do you take issue with any of the items listed in Component 11? If so, why?
15. Now that you're familiar with the systemic template, which programs do you think fit best with this instrument? Why?

3. Reading and Interpreting Templates and Profiling Packets

The real work of reading and interpreting templates is in understanding the data in the instruments within their contexts. To provide the context, every template should be accompanied by other documents, such as brochures and analysis of the data. These documents along with the template are called a profiling packet.

In Volume II, Appendix C you will find a set of guidelines for reviewing templates and profiling packets when you are on your own. These guidelines include two parts: 1) a standard set of questions related to all types of templates, and 2) a set of guidelines for each component of each template. Reviewing these guidelines now will help you complete the exercises that follow.

This chapter of the manual gives you the opportunity first to practice interpreting the data within specific components of some sample templates and then to examine a complete profiling packet using some guiding questions. We recommend that you do each exercise in this chapter in the order presented because each builds on the previous one.

Reviewing Template Components

The task of reviewing and interpreting the components of a completed template is to look for alignment between Effective Practice, intended outcomes, and actual outcomes for each item and component.

There are four possible permutations:

- Effective Practice is consistent with the Intended and Actual columns.
- Effective Practice is consistent with the Intended; the Actual is different.
- Effective Practice is consistent with Actual but not with Intended.
- Effective Practice is inconsistent with both Intended and Actual.

The exercises that follow give you a chance to practice what you've learned so far by reviewing some items from actual templates.

Exercise

The Program Activities Component of Teacher Development Templates

We've taken the component on Teacher Development Program Activities from three different templates, removed identifying names, and reproduced them so that you can practice. The review task here will be harder than in real life because you're looking at only one component of a template rather than the entire instrument, and you do not have the accompanying documents. So if you can interpret the component here, you can do so under any circumstance. Not convinced? Give it a try.

Before starting, perhaps a quick review of the Teacher Development Program Activities Component is in order. Its items capture how adults learn best, along with whether the instructional approach used with adults models the approach the program wants the teachers to use with their students. It also focuses on teachers practicing new learnings to apply them to their classroom.

Practice A: Reviewing a Program Activities Component of a Teacher

Development Template

Review Template Sample A on the following two pages and write the answers to these questions on a separate sheet. (Note: Don't be concerned if the wording and order of a few items are slightly different from those on the Teacher Development Template in Volume II. This sample is from an earlier version.) Answers to these questions are in Volume II, Appendix A, page A-23.

Questions

1. What are some of the things about either the program or the template that you don't know but would need to know if this template came from one of your grantees?
2. Is the level of detail appropriate? Why or why not?
3. To what extent does the Actual Program column match the Intended Program column? How do you know?
4. What inappropriate information do you find in the Actual Program column?
5. To what extent do you think the responses in the Intended Program column are an authentic portrayal of Effective Practice?
6. On what line do you find what appears to be the closest match?
7. If this template came from one of your grantees, how would you respond?

Sample A: Program Activities Component from a Template for Teacher Development Programs

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
4. <u>Teacher Development Program Activities</u>		
a. are appropriate for adult learners	<ul style="list-style-type: none"> Content and activities are challenging for adult learners. 	<ul style="list-style-type: none"> Definitely.
b. model teaching principles and strategies that can be transferred to the classroom	<ul style="list-style-type: none"> All activities presented in a hands-on inquiry based fashion, thus providing teachers with an example to emulate in their classroom. 	<ul style="list-style-type: none"> Definitely.
c. are hands-on, allowing teachers to actively construct knowledge	<ul style="list-style-type: none"> All hands-on activities will allow teachers to become actively involved learners. 	<ul style="list-style-type: none"> As intended.
d. include the use of tools, methods, and processes of scientists	<ul style="list-style-type: none"> Science as a way of knowing is emphasized. The limitations for environmental problem solving are presented. 	<ul style="list-style-type: none"> As intended.
e. immerse teacher in the scientific process	<ul style="list-style-type: none"> Understanding how nature works through the scientific method is emphasized. 	<ul style="list-style-type: none"> As intended.
f. include actual or simulated problems or challenges or "real world" science	<ul style="list-style-type: none"> Field trips will expose teachers to real world science. Include topics: recycling, erosion control measures, etc. 	<ul style="list-style-type: none"> As intended.
g. are designed so teachers learn cooperatively in small groups	<ul style="list-style-type: none"> Teachers are divided into grade level groups to share experiences and knowledge. 	<ul style="list-style-type: none"> As intended.
h. include opportunities to practice new classroom behaviors or strategies	<ul style="list-style-type: none"> Teachers are urged to test each of the 15 activities they developed, and urged to try the inquiry method of instruction. 	<ul style="list-style-type: none"> As intended. The teachers were required to teach 3 activities to their peers. This was very successful.
I. include opportunities for teachers to plan for use of new knowledge and skills in their own classrooms, with their own curriculum	<ul style="list-style-type: none"> Teacher will keep the 15 lessons that they develop for classroom use. Also asked to develop classroom design with environmental theme. 	<ul style="list-style-type: none"> Definitely.

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
j. include opportunities for teachers to work together as they learn and plan for transfer to their individual classrooms	<ul style="list-style-type: none"> Teachers are encouraged to work closely with those in their grade level groups as they plan their activities. 	<ul style="list-style-type: none"> Definitely.
k. other		

***Practice B: Reviewing a Second Program Activities Component from a Teacher
Development Template***

Look at the same component from another template; see Sample B on the three pages that follow. Again, review the text and write out the answers to the questions below on a separate sheet. Answers to these questions are in Volume II, Appendix A, page A-25.

1. What document, not included here, would be particularly helpful in reviewing this section?
2. Which column do you think provides better data — the Intended Program or the Actual Program? Why?
3. Where in this template do you see the evolution of a program, a moving toward Effective Practice?
4. Would you like to have additional information? If so, what?
5. On what line do you find the greatest discrepancy between Effective Practice and what happened in the program?
6. If this template came from one of your grantees, what would you say to the program director?

Sample B: Program Activities Component from a Template for Teacher Development Programs

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
<p>4. <u>Teacher Development Program Activities</u></p> <p>a. are appropriately designed for adult learners</p>	<p>a. Activities are designed to increase teacher's content knowledge as well as model effective teaching strategies. Activities are related to every day, real world problems as evidenced by the theme "Global Energy and Environmental Solutions." Teachers explore specific subjects in depth and focus on an area of particular interest to them for research. The program is designed to give teachers a firm foundation in research skills including an introduction to various print and electronic resources. The staff is available to participants to support them, where possible, upon conclusion of the first summer and in follow-up session.</p>	<p>a. Teachers wrote that their knowledge of science, specifically physics and environmental science, increased during the institute. They felt some of the introductory activities were too basic and that the institute moved too slowly in the beginning. However after they began designing and researching their experiments, the teachers became very enthusiastic participants.</p>
<p>b. model teaching principles and strategies that can be transferred to the classroom</p>	<p>b. Activities are conducted in a manner that uses effective teaching principles and strategies that can be used in the teacher's classroom.</p>	<p>b. As intended. The teaching strategy being modeled in each activity is listed in the agenda. Teachers felt the activities presented in the institute could be transferred to their classrooms. They also reported that the scientific process stressed throughout the institute could be brought back to their classrooms and applied to existing topics and activities in their curricula.</p>
<p>d. include the use of tools, methods, and processes of scientists</p>	<p>d. and e. The scientific method is emphasized throughout the length of the institute with special time devoted specifically to introducing participants to scientific research tools and methodology.</p>	<p>d. Although participants did not actually spend time in a laboratory using the instruments scientists at this site use, they did use simple scientific tools and instruments such as rulers, and easily available household supplies. Based on consultation with scientists, participants used the methods and processes used by scientists to design their experiments.</p>

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
e. immerse teachers in the scientific process	e. See above.	e. Teachers spent a significant amount of time researching and designing experiments based on consultation with scientists. However, as mentioned in the item above, teachers were not immersed in actual scientific research taking place at the laboratory. Based on the comfort level of participants, a slower approach to experiencing scientific research was developed.
f. include actual or simulated problems or challenges of "real world" science	f. The theme of the institute, "Global Energy and Environmental Solutions," deals specifically with challenges being addressed by scientists today. Activities are related to this theme.	f. A large portion of the institute was devoted to having teachers design and conduct experiments that dealt with the basic needs of plants. Although there may be scientists dealing with similar experiments, this is not what the scientists at this site do. As subsequent sessions build upon the first year, the experiments teachers are involved in are likely to become more closely aligned with the work being done by scientists at this site.
g. are designed so teachers learn cooperatively in small groups	g. Teachers work in teams for activities and to research an area of interest to them.	g. Teachers worked in groups of four or five with others from their districts.
h. include opportunities to practice new classroom behaviors or strategies	h., i., and j. The institute allows extensive opportunity for this. The third week focuses on teacher-directed activities and group work.	h. The teams designed lesson plans to accompany their experiment and turned these in to the Senior Program Leader. Many of the activities conducted during the institute allowed the teachers time to discuss with and suggest to each other new classroom behaviors and strategies. However, the activities did not require them to practice these behaviors and strategies.

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
I. include opportunities for teachers to plan for use of new knowledge and skills in their own classrooms, with their own curricula	I. See above.	I. Teachers were asked to share with each other how they would use certain ideas in their classrooms. These exchanges were casual and spontaneous. The lesson plan written for the experiment was the only lesson-plan development allowed for in the schedule.
j. include opportunities for teachers to work together, as they learn and plan for transfer to their individual classrooms	j. See above.	j. Teachers worked and learned together constantly. However, as mentioned above, they were not provided large amounts of time during the institute to plan for transfer to their classrooms. In fact, several participants said they would have liked more time for this.

Practice C: Reviewing a Third Program Activities Component from a Teacher

Development Template

Ready for the same component from a third template? See Sample C on the 11 pages that follow. Here's a very different one. Look at it in comparison to Samples A and B and answer the questions below on a separate sheet. (Note: because the three sample templates were completed at different times, they reflect some variations in the items as the instrument was refined over time.) Answers to these questions are in Volume II, Appendix A, page A-27.

Questions

1. What is different about the teacher development program activities in this template in comparison with the others?
2. Which sample, A, B, or C, most accurately portrays its program?
3. Which program has teacher development activities that more closely resemble Effective Practice? How do you know?
4. Which sample is most reader friendly (i.e., gives you the information you need in a highly readable format)?
5. Which of the three programs would you like to have as your grantee? Why?

Sample C: Program Activities Component from a Template for Teacher Development Programs

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
<p>4. <u>Teacher Development Program Activities</u></p> <p>a. Teacher Development Program Activities model elements of the vision of the classroom through:</p> <ul style="list-style-type: none"> • content • process • teacher role • collaborative learning • sensitivity to diversity • assessment 	<p>a. The program activities will be designed to mirror the vision of the classroom appropriate for adult learners. In so doing we will include a sequence of sessions that are repeated three times during the summer institute in recognition that learning is a spiral process.</p> <ol style="list-style-type: none"> 1. science content will be stressed through hands-on activities focusing on understanding (depth) rather than inclusion of all subject phenomena 2. science immersion scenarios will allow teachers to experience the processes of science through: <ul style="list-style-type: none"> ✓ experiencing science in the context of real-world problems that affect their lives (provide relevance) ✓ exploring content issues through problem solving, stressing depth rather than breadth (process) ✓ becoming engaged and reflecting/debriefing on the process and applying knowledge to their interaction with their students 3. FOSS classroom curriculum will be consistent with all aspects of the classroom vision outlined above and extensively tested in classrooms nationally 	<p>Science content, processes, and curriculum were illustrated particularly in the following sessions:</p> <ul style="list-style-type: none"> • <i>Energy Content</i> • <i>Material Science</i> • <i>District Content Matrix</i> • <i>Site Module: Magnetism & Electricity</i> • <i>Site Module: Liquids and Solids</i> • <i>Science Framework</i> • <i>Immersion scenarios</i> <p>✓ participants collaboratively pursued investigations and solved problems within small teams. The teams planned presentations to share.</p> <p>✓ one teacher wrote: "I gained a refreshing attitude that I will take back to my staff and students."</p> <p>In the exit questionnaire:</p> <ul style="list-style-type: none"> • 78% of the participants stated that they had increased their content knowledge a lot as a result of attending the institute. • 42% of the participants listed <i>developing students in science/math processes</i> as one of the most important objectives in teaching. • 100% of the participants stated that they learned skills for teaching hands-on activities and a great majority of teachers now feel comfortable using Site Modules.

Components of Effective Practice	<u>Intended Program</u>	<u>Actual Program</u>
	<p>Pedagogy will be modeled in presentations and addressed directly in several sessions.</p> <p>Scientists will play the role of mentors (process).</p> <p>Staff presenters will model pedagogy described in 1.</p> <p>Many sessions will utilize cooperative working groups.</p> <p>Diversity will be addressed in several sessions specifically through:</p> <ul style="list-style-type: none"> ✓ curriculum sessions (The site classroom materials used in the institute are designed based on the discovery approach and lend themselves well for teaching students with a limited proficiency in English. The materials were developed to accommodate different learning styles.) ✓ modeling involvement of scientists from traditionally underrepresented groups ✓ site presentation ✓ another site presentation 	<p>Pedagogy was modeled in presentations and specifically addressed in:</p> <ul style="list-style-type: none"> • <i>How People Think & Learn</i> • Pedagogy & Leadership • Facilitating in the Classroom • The Site 4-Step Model <p>In the exist questionnaire:</p> <ul style="list-style-type: none"> • 100% of the participants stated that they had gained new perspectives on how science/mathematics/technology should be taught. • 89% of the participants stated that <i>after</i> the institute they had a strong understanding of developmentally-based instruction as compared to 52% of the participants who stated that <i>before</i> the institute they were weak in their understanding of developmentally-based instruction. <p>Diversity was modeled through participation of scientists from traditionally underrepresented groups and was addressed in the following sessions.</p> <ul style="list-style-type: none"> • <i>Site Modules: Magnetism & Electricity and Liquids & Solids</i> • <i>Gender Equity</i> • <i>Teaching LEP Students & Site Instruction</i> • <i>Mother/Daughter Science Club</i> <p>In the exit questionnaire:</p> <ul style="list-style-type: none"> • 89% of the participants stated that <i>after</i> the institute they felt they had a strong understanding of teaching strategies of all learners as compared to 25% of the participants who stated that <i>before</i> the institute they felt they had a strong understanding of teaching strategies of all learners.

Components of Effective Practice	Intended Program	Actual Program
	<p>Assessment in the program will be modeled throughout the institute through:</p> <ul style="list-style-type: none"> • journal writing • discussions • end-of-day feedback • teacher presentations <p>The assessment tools will provide leaders/teachers with insight into participant level of understanding for mid-course changes to better meet needs (journal writings will be used only in a limited basis for assessment — they will be reviewed informally by staff).</p> <p>We will devote time to participant self-assessment — “where do I still need help?”</p> <p>As it related directly to the classroom, the first year of the institute will focus on reviews of national and state reform efforts, portfolio standards, and authentic assessment instruments developed specifically for the site’s science modules. Following years will expand on these areas.</p>	<p>Assessment was modeled successfully in the institute as outlined in column 2.</p> <p>All participants wrote reflectively in their journals on a daily basis. Open-ended and directed discussions were common occurrences. Participants responded to “end-of-day feedback” and to “gots and needs” chart. All participants had the opportunity to present ideas to the whole group.</p> <p>Assessment was directly addressed in the sessions:</p> <ul style="list-style-type: none"> • <i>How People Think & Learn</i> • <i>Why Does Science Look Like This?— National Reform Trends</i> • <i>Assessment: Portfolios, National Standards, & District Benchmarks</i> <p>Participants met in grade-level and school-site teams to discuss how they would implement a new assessment system and create a portfolio system; both reflective of authentic assessment. The principals and district administrators also attended several of these sessions and worked with their school team on developing a plan to implement these systems.</p>

Components of Effective Practice	Intended Program	Actual Program
<p>b. Model elements are appropriately designed for adult learners</p>	<p>b. model elements will be appropriate designed for adult learners:</p> <ul style="list-style-type: none"> • It is assumed that individual participants will be at different stages of concern, based upon their prior experiences with science and leadership. We intend to assist growth of individuals from each of their various levels of understanding, not gearing the institute toward the needs of those at one level only. We will work through positive reinforcement and provide opportunities for practice of the concepts learned. Since mistakes are part of the learning process, a good part of our school-year program is devoted to working out problems. • The workshop will also be structured to, in general, follow the normal stages of concerns and the notions expressed by spiral education. • We want the participants to know they are important. Therefore, we will include them in the planning process by inviting input and polling needs. • The institute is based, within original grant parameters, upon participant input/needs. • Materials are a key ingredient in implementing an innovation: One sessions will include Bay Area resources; classroom (student and teacher) resources will be available for perusal at the institute; participants will receive curricula materials for classroom and site materials. 	<p>The program was effectively designed for adult learners based on how adults learn and the criteria that were set out in our intended program. This design included the idea of spiral education in that most concepts were revisited several times through different approaches.</p> <p>Specific sessions addressing participant concerns as expressed in the <i>concerns about implementation at my site survey</i> we conducted included:</p> <ul style="list-style-type: none"> • <i>District Science Content Matrix</i> • <i>What does it mean to be a Lead Teacher?</i> • <i>Grade-Level and School Site Discussions & Planning</i> • <i>Workshop Preparation & Skills</i> • <i>District Mathematics Adoption/Course of Study</i> • <i>Leadership Styles and Peer Support Strategies</i> • <i>Making it all work</i> (addressed time, materials, resources, extra help) • <i>Materials management</i> <p>Given that this will be the first year of district implementation of new math materials, and that the district is under a mandate from the state to improve methods of teaching limited and non-English speaking students, the following sessions were incorporated to assist the participants in meeting the specific needs of their district:</p> <ul style="list-style-type: none"> • <i>Teaching LEP Students</i> • <i>Gender Equity</i> • <i>Family Involvement</i> • <i>Mother/Daughter Science Club</i> • <i>New Math Course of Study</i> • <i>New Math Adoption</i> • <i>How to serve as a lead teacher for the new math adoption</i> <p>All science immersion scenarios were carefully planned to be of interest to adults living in the Bay Area.</p>

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
	<ul style="list-style-type: none"> Curriculum for a variety of grade levels will be investigated through adult-level interaction, viewing the materials both from the student's point of view and then from the teacher's point of view. Participants will be given opportunities to express interests and needs to be addressed in our sessions — one session will be directed completely by participant stipulation of needs; others will be focused or revised based on daily feedback. Many of our presenters will have had training and experience in teaching adult audiences. The immersion scenarios will be built around adult interests and capabilities. Scientists and staff developers will meet with the program director prior to the institute to review their presentations keeping in mind meeting the needs of adult learners. 	<p>Teachers were linked to resources and support in many ways and through several sessions. The collaboration on our planning team provided an extensive pool of resources.</p> <p>The workshop was also structured to, in general, follow the normal pattern of concerns. During the first week of the institute we addressed resources, materials strategies, presentation skills, and practiced with hands-on curriculum, moving toward concerns of student understanding and leadership at the school site as the institute progressed. We repeatedly discussed what worked and what didn't and utilized group problem solving and strategy sharing.</p> <p>In the exit questionnaire:</p> <ul style="list-style-type: none"> 100% of the participants stated that the program staff was receptive to their suggestions for program improvement and effectively responsive to their questions. 100% of the participants stated that the availability of resources was excellent. 94% of the participants stated that they had significant opportunity to influence their summer experience to meet their needs. <p>Additional comments in the exit questionnaire include:</p> <p>"Receptive to our concerns. Addressed our needs and questions."</p> <p>"I was really impressed at the delivery of lessons and how they helped us in a problem."</p> <p>"The most important thing I gained from this experience was meeting, listening to, and interacting with the scientists and engineers of this site. It is great to know that such resources are available."</p>

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
	<p>The structure for classroom resources for the first summer institute will be devised in the form of two material purchases that the participants may apply for, individually or in groups. Purchase guidelines are provided and applications are reviewed by members of the planning committee. The first purchase proposals, for a maximum of \$200, will be introduced midway through the institute and will be due the last week. Teachers may apply for science materials to use in their classrooms or cooperatively at the site. The second proposal, for a maximum of \$500, will be due approximately half-way through the year, and will have more of a site focus. Guidelines will require an implementation (use) plan and the materials must meet certain criteria (such as district adopted, aligned with district content matrix, etc.).</p> <p>School year support for teachers as they begin to implement the program will be built in through:</p> <ul style="list-style-type: none"> • five school-year institute days (see above) • five days per site for Staff Developer support time • access to planning team throughout the year • establishment of support mechanisms by the teachers during planning sessions at the institute (including principals, district administrators who will be attending) 	<p>As a first step toward effective grant writing, participants were given an opportunity to complete a two-page proposal for material purchases of up to \$200 under the following guidelines:</p> <ul style="list-style-type: none"> • materials were to be used to augment base science program • materials were to be aligned with district content matrix for grade level taught <p>All but two of proposals met the guidelines. These two were returned and have been resubmitted.</p> <p>The second proposal for material purchases of up to \$500 each, is planned for approximately half-way through the year, and will have more of a site focus.</p> <p>School-year support for the teachers for implementation was built into the program. (Some of the support is listed in column two.) The commitments from the district were reviewed during the institute with the principals, superintendent, and assistant superintendent. This process was followed by a very effective reflective discussion (fish-bowl process) involving the principals regarding their planned support.</p> <p>In the exit questionnaire:</p> <ul style="list-style-type: none"> • 94% of the participants stated that they received very good-to-excellent support for implementing experiences to the classroom.

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
c. Model teaching principles and strategies that can be transferred to the classroom	<ul style="list-style-type: none"> • scientists playing the role of mentors • staff presenters modeling pedagogy described in 1 • many sessions utilizing cooperative working groups <p>— see 2a for a more complete list</p>	<ul style="list-style-type: none"> • Scientists planned and facilitated science immersion scenarios, typically in the role of a mentor. • The 4-Step Teaching-Learning model was implemented in each of the science immersion experiences. • The Site Module sessions all modeled the appropriate teaching principles and strategies. • Pairs and teams of four-to-eight worked cooperatively throughout the institute in the areas below: <ul style="list-style-type: none"> ✓ <i>Magnetism and Electricity</i> ✓ <i>Liquids and Solids</i> ✓ <i>Creative Publications-New Math Adoption</i> ✓ <i>All science immersion scenarios</i> • Reflective journal writing everyday • Assisting teachers to take charge of their own learning <p>One teacher wrote: "I also gained new knowledge about the <i>learner</i> in my class rather than the <i>student</i>. The <i>student</i> is passive, the <i>learner</i> is active."</p> <p>In the exit questionnaire:</p> <ul style="list-style-type: none"> ✓ 94% of the participants stated that they received very good-to-excellent support for extending the experience they had in the classroom. ✓ 100% of the participants stated that they gained new perspectives on how science and mathematics should be taught. <p>One teacher wrote: "I was impressed at the delivery of lessons and how they helped us in a problem."</p>

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
<p>d. Include the use of tools, methods, and processes of scientists</p> <p>e. Include actual or simulated problems or challenges of "real-world" science</p>	<p>d. and e. In the immersion scenarios, the primary goal will be to allow the participants to experience science — laboratory processes as well as thinking processes. They will be involved in solving real problems related to work at the laboratory and will be exposed to the overall problem, including the many variables and possible social implications. Together in teams, they will brainstorm solutions, propose investigations, gather data utilizing scientific and engineering instruments and tools, analyze, infer, and make concluding decisions (take action) regarding their process and findings.</p>	<p>The institute included the use of tools, methods, and processes of scientists while including actual or simulated problems and challenges of real-world science.</p> <p>The planning team and the participants felt the institute was successful in accomplishing what is outlined in column 2.</p> <p>Some of the comments in the exit questionnaire included:</p> <p>"The immersion scenarios -- I was worried about the content when I was supposed to focus on the PROCESS!"</p> <p>"I was given a chance to learn and apply the scientific process. I feel more confident about returning to my school site to implement a science program."</p> <p>In the exit questionnaire:</p> <ul style="list-style-type: none"> • 94% of the participants stated that they had increased awareness of kinds of research being done at DOE laboratories. • 100% of the participants stated that they had an increased awareness of the kinds of research being done at the NTEP institute lab. • 84% of the participants stated that they increased their knowledge of applications in science and mathematics.

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
f. Include opportunities to practice new classroom behaviors or strategies	f. Sessions focusing on site curriculum will include time to practice and try new things. Moreover, the institute will be structured to provide three years of learning (summer institute days), applying (classroom), analyzing (during school-year institute days and the beginning of the following summer), reapplying based on analysis and mentor input, etc. This system follows the pattern of good coaching (observe/analyze/ experiment) which can also be used as a self-coaching process through journalizing as well — a tool stressed in the institute.	<p>The institute offered several sessions to meet these needs:</p> <ul style="list-style-type: none"> • <i>Site Module: Magnetism & Electricity</i> • <i>Site Module: Liquids and Solids</i> • <i>New Math Course of Study/New Math Adoption</i> <p>In addition to the sessions above, opportunities for journal writing were offered to allow for reflective time.</p> <p>In the exit questionnaire:</p> <ul style="list-style-type: none"> • 100% of the participants stated that they had gained new perspectives on how science and math should be taught. • 89% of the participants stated that they now feel strong in their understanding of developmentally-based instruction, and the majority of participants now favor many of the best-intended instructional approaches. • 89% of the participants stated that they now have a strong understanding of teaching strategies for all learners. • 100% of the participants stated that the materials provided will be of use in the classroom and that the program provided ideas for ways to present content to their students. <p>As one participant stated: "My teaching will never be the same. I will always look for developmental signposts when planning curriculum. I can see the importance of integrating math and science thoroughly and writing about the experience as much as possible."</p>

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
<p>g. Include opportunities for teachers to work together, as they learn and plan for transfer to their individual classrooms</p>	<p>g. Teachers will apply to participate in the program in teams. Some planning will be done in these site teams.</p> <p>The first summer of the institute will include approximately 10 hours of grade-level or site planning time, in addition to smaller time increments included in the sessions.</p> <p>The school-year plan will include:</p> <ul style="list-style-type: none"> • Three days of release time for participants to plan together, peer-coach, team teach, etc. • Ten days for each of three staff developers (district teachers) to mentor, assist in planning, team teach, etc. <p>Many of the summer activities will be conducted in teams.</p>	<p>Throughout the institute there were many opportunities for cooperative learning, collaborating, and team building. The institute was designed such that individuals worked together in teams comprised of teachers from their schools and in teams comprised of teachers of similar grade levels. They also participated in site-team planning and worked with the Staff Developers, teachers, and scientists in random groups to solve problems.</p> <p>For example, in the immersion scenarios, the teachers were divided into three groups. Each group worked with a different scientist or engineer on a unique problem. They returned at the end of the scenario to share their experiences through presentations designed by their group.</p> <p>A session entitled: <i>Making it all Work in your Classroom and at Your Site</i> allowed the participants and the planning team to problem solve current or foreseen implementation difficulties.</p> <p>Planning time for site and grade level was allotted as per schedule with the exception of one planned session which was eliminated to accommodate changes made to meet other participant needs.</p>

Components of Effective Practice	Intended Program	Actual Program
<p>h. Other opportunities for planning site (individual schools or combining schools) in-service days and staff mentoring.</p>	<p>h. The participants in combined schools will be lead teachers who work with their staffs to strengthen the science programs in their schools. They will have three days of time allocated each year for peer mentoring. Building these skills will be incorporated into the summer institute.</p> <p>Each school-year institute day includes planning time for each of the staff development days the combined school teachers will lead during the year. The combined school-year institute days are scheduled to precede each of these in-service days.</p> <p>Since we will be working with more than half of the elementary schools in the district, it is our intent to include science mentors from the non-combined schools in school-year activities to the extent they are interested. Some school-year activities, such as the combined school-led in-services, or community activities, may involve some of these schools.</p>	<p>As mentioned above, there was (during the institute) and will be (during the school year) more time allocated for opportunities for planning site in-service days, as well as time allocated for staff developers to assist the lead teachers (30 days total), and for lead teachers to plan together and mentor at their site (3 days per teacher). At the summer institute there were the following sessions:</p> <ul style="list-style-type: none"> • <i>Planning Time for Next Year's SIP Days</i> • <i>School-site Planning Time with Administrators</i> • <i>Pedagogy & Leadership: How to Help Adults Learn</i> • <i>Peer Support in the Change Process</i> <p>In June, the combined school project managers met with the superintendent to discuss how to best include/assist the non-combined schools.</p> <p>In the exit questionnaire:</p> <ul style="list-style-type: none"> • 73% of the participants stated that <i>after</i> the institute they had a strong understanding of strategies for implementing with the rest of their school staff what they had learned at combined schools, as compared to only 10% who stated that <i>before</i> the institute they had a strong understanding of strategies for implementing what they learned at combined schools with the rest of their school staff.

Exercise

The Program Administration Component of Teacher Research Participation Templates

Let's move to a different template — Teacher Research Participation Programs. In these programs teachers spend a significant period of time (usually eight weeks) in a science research laboratory actually doing the work of scientists and exploring application to their teaching environments. The core of these programs is an effective mentor (scientist)/teacher relationship. We've chosen the Program Administration component for analysis.

The elements of this component identify essential administration items that insure an effective teacher research program. Those include the following:

- program goals understood by staff and participants
- clear roles and responsibilities for staff
- selection criteria for teachers and mechanisms for insuring positive mentor/teacher relationships
- presence of a collegial atmosphere
- effectively handling logistical details
- adequate communication and record keeping

Practice D: Reviewing a Program Administration Component of a Teacher Research Participation Template

Take a look at the Program Administration component in Sample D on the following page and answer these questions on a separate sheet. Answers to these questions are in Volume II, Appendix A, page A-29.

1. Which items in the Intended Program column are an authentic portrayal of Effective Practice?
2. Which are not?
3. Which responses in the Actual Program column seem to match Effective Practice?
4. How would you describe the tone of this template?
5. If this program were one that you were responsible for, what might you say to the program director?

Sample D: Program Administration Component from a Template for Teacher Research Participation Programs

Components of Effective Practice	Intended Program	Actual Program
8. <u>Program Administration</u>	a. None - Assume teachers read program literature which includes goals.	a. Teachers and mentors both enumerated goals in interview.
a. Program goals are clearly stated and understood by all		
b. Clear assignment of responsibility for program administration	b. All contacts and program duties performed by Formal Program Leader.	b. Some mentors knew the Formal Program Leader; some teachers did not know her name but knew they could talk to her at weekly meetings.
c. Effective troubleshooting mechanism and smooth program operation, including careful monitoring of mentor/teacher relationship	c. First-day orientation and weekly meetings to maintain contact with teachers.	c. Mentors knew they could ask for assistance. Contact with mentor is sometimes minimal; this is on individual basis as needed.
d. Creates collegial atmosphere	d. Teachers invited to program lectures and social gatherings for other programs for teachers.	d. Mentors tried to create collegial atmosphere and make teacher one of group. Teachers met together twice a week.
e. Ensures pre-program interactions of Lab and mentors with participants	e. Send general information, housing, map, assignments, etc. prior to program.	e. Telephone contact. National teacher reported unsatisfactory planning. The teachers made the contact as needed.
f. Plans carefully for housing and other logistics (e.g., transportation, information about the community)	f. Administrator sends information, participants make own arrangements for housing and other local items.	f.
g. Ensures effective program follow-up	g. Collect all the information and forms before handing out final paycheck.	g. Teachers reported only brief contact with program administrator.
h. Communicates with and reports regularly to HQ	h. Administrator reports to HQ.	h. Contact is maintained through monthly report and other submissions as required.
I. Maintains database of participant and mentor information	I. Database contains information supplied by participants and mentors.	I. Database is prepared.
j. Selects teachers for compatibility with Lab mission and mentor specialization and work style	j. Mentors select participants.	j. Both mentors and teachers were pleased with research assignments. One teacher was placed in a second assignment.

***Practice E: Reviewing the Program Administration Component of a Second Teacher
Research Participation Template***

A Program Administration component from another template is found in Sample E on the following three pages. Review it and answer the questions below on a separate sheet. Answers to these questions are in Volume II, Appendix A, page A-31.

1. Which items in the Intended Program column seem to be an authentic manifestation of Effective Practice?
2. Which items in the Intended Program column may not be a portrayal of Effective Practice?
3. For which items do you find the Actual Program and Intended Program column responses matching each other and Effective Practice?
4. Which program comes closer to matching Effective Practice on this component — the template represented in Sample E or Sample D?
5. Which is more reader friendly? Why?

Did you find reviewing samples D and E easier than reviewing samples A, B, and C? If so, you're beginning to know how to read and interpret data. And the more you do it, the better you'll get.

Sample E: Program Administration Component from a Template for Teacher Research Participation Programs

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
8. <u>Program Administration</u>	a. Teacher Program Manager conferences with each mentor explaining the goals of the program and reviewing the qualification of the TRAC participants; TPM and lead teacher review goals at orientation with participants.	a. Teacher surveys and mentor evaluations indicate that the experience matched or exceeded their expectations/preset goals; the orientation included an explanation of TRAC and overview of the site.
b. Clearly assigns responsibility so participants know whom to consult with for what purposes	b. TPM administers the program; teachers go to TPM for assistance; TPM is assisted by a lead teacher whose primary responsibility is to act as liaison between the TPM and teachers and to coordinate weekly teacher group meetings.	b. TPM was available to teachers throughout the eight week interim; lead teacher acted as liaison between TPM and teachers; both TPM and lead teacher facilitated teacher interaction and development.
c. Employs trouble-shooting mechanism for careful monitoring of mentor/teacher relationship	c. Lead teacher visits all teachers in their workplace, reporting to TPM any mentor/teacher conflicts.	c. Lead teacher frequently visited teachers in the workplace and almost daily met them for lunch on site; one concern about project assignments was brought to the lead teacher's attention.
d. Encourages applications of teachers from groups underrepresented in science, math, and technology fields	d. A large percentage of applications the TPM reviews are from underrepresented teachers.	d. Women were well represented in the applicant pool; 10% of the applicants were African-Americans; TRAC applications for next year were given to all SITE teachers.
e. Creates collegial atmosphere	e. Weekly meetings are held; TPM attends each one. TPM has an "Open Door Policy"; teachers integrate into research teams.	e. Teachers freely discussed their projects and experiences at the weekly meetings; teachers bonded and friendships were made; some soon discovered that they were working on similar projects and combined their resources.
f. Ensures pre-program interaction of Lab and mentors with participants	f. Letters, living info, brochures, and mentor's phone numbers are sent to teachers.	f. Most teachers called their mentor prior to arrival; some requested that a description of projects be included in the early mailings; one teacher requested earlier notice on housing.

<u>Components of Effective Practice</u>	<u>Intended Program</u>	<u>Actual Program</u>
g. Plans carefully for housing and other logistics (e.g., transportation, information about the community)	g. Housing information is sent to each participant; efforts are made to house participants together at a local university; information about the community is given to each participant upon arrival.	g. Teachers stayed together in a new dorm at a local university; some problems arose due to misunderstanding with the university and the poor construction of the new dorm; teachers did not have easy access to telephones; information about community was provided; participants needing travel assistance were accommodated.
h. Ensures effective program follow-up	h. Participants evaluate the program; tell us how their teaching will change; the TPM is available if teachers need assistance.	h. Teachers described in a paper and in profile reports how the experience will impact their classroom teaching; one has already enlisted her mentor as a guest speaker.
I. Communicates with and reports regularly to HQ	I. Monthly narrative report, which includes education highlights, sent to HQ; bimonthly report on education sent to site office.	I. Monthly narrative report, which includes education highlights, were sent to HQ; bimonthly report on education was sent to site office.
j. Maintains database of participant and mentor information	j. Education Secretary and TPM maintain this information	j. Education Secretary maintains this information and TPM has established a database.
k. Selects teachers with compatibility with Lab mission and mentor specialization and work style	k. Choose teachers who are compatible with Lab's mission; mentors submit project proposals; mentors are chosen based on the project proposal and how well they work with others; mentors receive selected applications.	k. Chose teachers who are compatible with Lab's mission; mentors designed projects; one project was difficult and impossible to complete in the time frame allowed; even so, all teachers reported that they were pleased with their mentors and their projects; mentors were involved in selecting the applicant.

Reviewing a Profiling Packet

When you get ready to review a real template, you'll need to have a context for understanding the data in the instrument. You can quickly gain that context from other documents that should accompany every template.

Together with the template itself, we call those documents a profiling packet. They include:

- a brochure or other descriptive literature about the program (e.g., a letter used in recruiting);
- a schedule of activities;
- the completed template, including the cover sheet on the front and the demographics data sheet on the back; and
- a report that analyzes the data in the template and identifies strengths of the program and areas for improvement.

Reviewing the documents in the order listed above will take you from the general to the specific, enabling you to understand the program first from a broad brush perspective and then from a closer view. It is possible to review a template without having these other pieces of the packet, but it's more time consuming and more difficult.

Practice F: Reviewing a Profiling Packet

In our final activity, we want to approach a “real life” situation as much as possible. In Volume II, Appendix D you'll find a complete profiling packet. It's from an actual Teacher Development Program in materials science and technology (MST). The packet is similar to one that, as a project officer, you might receive from one of your grantees. Read through the packet and then answer the following questions about it on a separate sheet. Answers can be found in Volume II, Appendix A, page A-33.

1. List the different pieces of this profiling packet. Is anything missing?
2. If you received this packet from one of your grantees, what would be your initial reaction? Why?
3. Is there congruity between the materials describing this teacher development program and what you found in the template?
4. Is there congruity between the goals and objectives of the program and the planned activities?
5. How was the template completed?
6. Is the template complete?
7. In what ways has the staff changed the program based on data from previous templates?
8. Is the report based on data from the template? Give examples.
9. If you were the project officer, what else might you want to know about this program that you did not find in the profiling packet?
10. If you were to visit this program, what might you want to see; and who would you want to talk with?
11. How critical is it for the grantee to complete a template for this program next year?

4. Using the Template to Insure Program Quality: Moving Beyond Template Analysis

You've probably picked up this manual because you need to do more than understand how to read and interpret a template. This section addresses your role as a federal agency project officer in insuring program quality, and how you gather data about a grantee's program. We close with several vignettes that allow you to practice responding to field program staff about their templates.

Your Role

Your role as a federal agency project officer includes monitoring a program's performance against your agency's expectations. In providing funding for a program, your agency has expectations about the grantee's work, processes, and outcomes. You are responsible for seeing that the grantee meets those expectations. You oversee the agency's interests in the program by understanding its operation and results in relation to the goals of your agency. This is understandably a different perspective from that of the grantee's program director and staff. Part of your job is to see that these perspectives are held in harmony.

We see monitoring not as a confrontive or punitive process. Rather, within the scope of monitoring responsibilities project officers can make helpful observations and ask facilitating questions. The trick is for you to be clear about your role and to communicate that role and expectations to the grantee. Shared expectations are an important foundation to successful communication and building a trusting relationship. Grantees will not see you as helpful if they do not trust what you say. Unless required, they will not use profiling if they think that you will use the data against them.

If you are monitoring a program that uses profiling, you are greatly aided in your task. The process depicts in a template what is considered to be best or Effective Practice for that type of program. The underlying assumption is that the more closely a program approximates Effective Practice, both in its design and in its implementation, the better its results will be. Profiling gives grantees and project officers a common language, understanding, and conceptual framework within which to make decisions to fund, support, enhance, or expand a program. Simultaneously, profiling sets reasonable expectations.

It doesn't arbitrarily penalize new or young programs, rather it pinpoints program areas needing improvement. This helps grantees make mid-course corrections. Your task, then, is to review the template and other profiling packet materials looking for evidence that the program's operation is approximating Effective Practice. When not, you will look for evidence that the program is making changes to correct its design or improve its implementation so that it more closely resembles Effective Practice.

A Likely Scenario

In the previous sections you have learned what a template is, the contents of templates for four program types, and how to read and interpret templates. Now what? What do you do with this knowledge?

Let's say you are the federal project officer responsible for monitoring grantees and guiding them toward the most effective programs. Such success will contribute to the larger aims and reputation of the agency in addition to meeting needs in the field. You will be required to use your knowledge about the program, its results, and its improvement efforts in an agency discussion about setting priorities. The outcome of the discussion will be decisions about which programs will be continued and supported more robustly and which should be scaled back or discontinued.

You receive documentation from a program that includes a profiling packet. You've refreshed your knowledge about templates and their uses, and you've read and interpreted the template and other materials sent to you. You know from past experience, research, and national priorities that this type of program has potential for huge impact. In reading the material you note that after a year's operation a number of Actual Program entries do not describe what you would expect to see in an effective program. You are in a position to help focus attention on how the program operation matches most Effective Practice, and you want to provide that support to the program staff. You also know that your review has raised some questions in terms of how you will interpret results to other agency staff. What do you do? The following section offers some suggestions on how to gather more data.

Three Techniques for Data Gathering

You will very likely need to gather more data from site staff to get some answers to your questions. You can do this by reviewing the documentation and the template itself if you haven't already, by

interviewing by telephone the person or persons who completed the template, or making a site visit to see firsthand what is happening.

Review of Written Documents

1. When to use document review. You begin with a review of written documents. Documents are the artifacts of the program's operation chronicling the program over time. You will first need to determine if "all the pieces are there." Remember from an earlier chapter that the profiling packet includes more than just the template itself and that these other documents are necessary to gain a full understanding of the program. If there are pieces missing, request them so that you have a complete packet. Omissions may be the place where your inquiry starts. Why are items missing? What will be necessary to obtain them? Does the program person understand why that part of the documentation is important?

If all the pieces are present, your next step is to review the content carefully. Look for the "big picture" of the program and the degree to which it is internally consistent with the goals and objectives of the funding agency.

2. What questions to ask. Is there a brochure? Does it give an overview of the program that matches what is described in the template?

Is there a schedule of events? Can that schedule accommodate the activities described in the Intended Program column of the template?

Are the template, program description, and other materials reflective of what was asked for in the original Request for Proposal (RFP)? Is it clear how the goals and objectives of the agency's program are inherent in the activities described in the Intended Program column?

Is the report included? Does the report address what is in the template? Is there evidence of data gathering and analysis of the Intended Program and Actual Program in the report?

From earlier chapters in this manual you learned to look for congruence in spirit and deed between program activities and Effective Practice. For example, if Effective Practice indicates that minority teachers and students should be recruited for a specific program, what does the Intended Program column indicate as to how this will be done? What actually happened? Were there efforts to actually follow through and make it happen?

3. What you get from document review. In addition to gaining a general knowledge and feel for the program by reading the written materials, you can also begin to identify possible problem areas that you will query in an interview or site visit. Discrepancies among the packet parts themselves or between Effective Practice and Intended Program are very logical places to start. If these parts don't relate, chances are there is confusion in the implementation of the program. If Effective Practice and Intended Program don't match, it is unlikely that actual results will match what program staff desire to accomplish.

Incongruencies between the intended and actual are a bit more subtle yet are still key starting places for investigation. Why is the program not able to achieve what it intended? The reasons will provide guidance for what can be done. If the intended activities are not representative of Effective Practice, then the fix is to redesign the intended activities; if the intended does match the Effective Practice, then you need to explore why the intended might not have been implemented as planned.

From your document review extract questions that can be used in your telephone interviews or site visits.

Telephone Interviews

1. When to conduct telephone interviews. Telephone interviews are effective when you have specific questions or need information that is not in the written documentation. Telephone interviews are most successful when some rapport has already been established so that your grantee knows you and is comfortable sharing data on the phone.

2. How to frame the questions. Define your questions carefully before the telephone call. Make them specific and related to the program operation or results that are concerning you. Be straightforward; this is no time for trick questions.

How you frame questions makes a difference. "Why haven't you done this?" can create defensiveness. "Help me understand how this task reflects Effective Practice?" can invite dialog and clarification. In a telephone interview where the other person cannot see your face or body language, words and tone are everything! Think through the wording of your questions and write them down before the call.

3. How to lay the groundwork. For an information gathering interview, make a telephone appointment. Don't catch someone off guard or in the middle of doing something else. When you set the interview date, be very clear about the purpose of the call and who you want to speak with. Decide if

one-to-one or conferencing best suits the purpose. Offering the questions ahead of time might be very helpful to you and your grantee. Leave enough time to complete the interview comfortably.

4. Tips for the call. Call at the appointed time. Spend a brief amount of time in greeting and re-establishing rapport and then get to the business at hand. Restate the purpose for the call and outline the procedure. If you need to tape record the call, inform people ahead of time and get their permission. If you are willing to entertain questions about your questions or about other topics, suggest that these questions come at the end of the interview. Thank people when you are finished and tell them again what you will do with the data.

5. After the call. If there are follow-up items from the call, complete them promptly.

Site Visits

1. When to conduct a site visit. Plan a site visit when there is no other way to get the data; when you need to confirm for yourself that data gathered by other techniques is valid; when you need to build relationship with the staff; and when you need to see the program in action to understand it.

Often there is not enough money in an agency's budget to make site visits, even when such a visit would greatly facilitate relationship building or operations. Alternatively, there are times when agencies require site visits as part of the monitoring process. In either case site visits are time, energy, and resource intensive. There never seems to be enough time or money to "do it right"; therefore, careful planning is necessary for getting the most out of the trip. Be clear about the purpose of the site visit and what you expect to get out of it.

2. How to get the data you need. When you have your purpose in mind, think about the evidence you need to gather. What questions can you ask? List your key questions with follow-up probing questions.

Decide who is the most qualified to answer your questions. You will want to talk to a cross section of people to get a variety of opinions and evidence as well as to check the consistency of the responses. This is especially true if a group, for example, scientists, was left out in the initial data gathering. Get the view of more than the program director or the person in charge. It is also important to get the views of the end user. Even if a program is running well, it may not be benefiting anyone.

In addition to talking to people, what do you need to see? There is no real way to see a program in action other than to visit it. Don't allow all of your time to be spent in interviews. The best a site visit can do is give you a "snapshot" of a program. Consider carefully what you can see in a short amount of time that will be representative of what you want to know. Do you want a tour? A demonstration? To see students working on an experiment? Work with your site contacts; they can help you determine the choices.

3. How to lay the groundwork. Sometimes surprise snapshots are outstanding; most of the time a good snapshot needs to be arranged and composed. Work with the site people to plan the visit. Allow them to participate and make suggestions about what to see and who to talk to. Understand why they want you to talk to certain people and see certain things. Then compare their reasoning with your purpose and questions. Where they match you have the makings of an agenda.

Site visits related to program improvement require an atmosphere in which the grantee staff can both show off their best and talk about what they think is not going well without fear of judgement. Planning the site visit together is one way to establish the proper tone of the visit. Make sure everyone involved is notified and understands the purpose of the visit.

Insist on having the schedule or agenda in hand before you arrive so that you can be sure it meets your needs. Negotiate points that look difficult to achieve.

If you are traveling with a team of people or colleagues, make sure that team members are properly briefed, know their role, and are clear about what questions to ask and what evidence to find.

4. Tips for the visit. Arrive on time. Keep to the schedule, but be prepared to be flexible. Follow your plan for gathering data. Many people have worked hard to prepare for this visit, so give them your full attention and interest. Work to strike a balance between meeting your own needs and accommodating those of the site staff.

If you remember nothing else, remember why you are there. No other person will insure that you get the data you need.

Wrap up at the end of the visit. Give your hosts some feedback related to what you have seen and heard in light of your purpose. If there are "to do's," state them clearly along with who is responsible and the expected time line for completion.

After the visit, complete your "to do's" promptly and give feedback to the project director. A "thank you" of some kind is in order. Many people restructured their schedules to accommodate you. No matter the results of the visit, it is common courtesy to thank people for their efforts.

Insuring Program Quality

What can you do with the data gathered? How do you insure that the program is working toward Effective Practice? There are two perspectives from which you can help.

As an individual with a vested interest in the program, its operation, and its outcomes, you can point out discrepancies or inconsistencies, help problem solve, and listen to site staff work things through. However, where daily operational issues and procedures are concerned, you must work from a distance.

For example, you can make suggestions related to your observations. After your review of the profiling packet, you note instances in which the description in the Actual column does not match that listed in the Intended column. Perhaps, teachers do not appear to work together on their return to their school; school administrators do not pledge any type of support to the program; and a limited number of teachers participate in the follow-up. In your discussions with the program staff, you can raise some questions about the discrepancies that you have noticed and offer some suggestions. You may know of and suggest as a resource, another grantee who has experienced similar problems and has been able to resolve them. In the end, you should expect your grantee to address these discrepancies in the next iteration of the program.

In the second perspective, as a project officer for the funding agency, you hold direct responsibilities for making sure that the agency's goals and objectives are clear to the grantee and that the program is moving in the direction of meeting those goals and objectives. You can be more direct regarding documentation, and you can advocate (or not) for the program within the agency. Your role is to protect the interests of your agency and see that the program falls within the agency guidelines.

Let's say your observation of a program is that follow-up is minimal. This observation leads to a discussion of the costs involved in doing follow-up in a national Teacher Development Program where participants come from all over the country. Follow-up simply requires more money than if all the teachers are geographically close. As project officer, you can advocate within your agency for more money for the program. Or, if no money is available, you can help the staff redesign the program in ways that still accomplish the goals.

Overall your balancing act between the aims of your agency and the goals of the program and its sponsoring organization is to understand what the players are doing and where their common goals align. Project officers are asked to provide critical data and assessments to determine whether funded programs are achieving desired results. To be responsible to your agency, you need to know how a program operates as well as the degree to which it reflects Effective Practice and/or is working to better reflect best practice.

Here are some vignettes that give you practice in working with your grantees to insure program quality.

Exercise

Practice Vignettes

Read the following vignettes. Determine what you would do in these situations. Answers and discussion are in Volume II, Appendix A, page A-37.

Vignette A

You are reviewing profiling packet materials for a Teacher Development Program. One component of Effective Practice states that a program will “design and conduct participant recruitment such that teachers representing and serving underserved populations are reached.” The Intended Program column states that, “recruitment materials encourage school districts to include teachers representing and working with underserved populations.” You have looked at the recruiting materials and find this to be so. However, the Actual Program column reports that of 30 participants, two represent underserved populations and 25 are men. You notice that the demographic data from the template indicate that teachers came from schools with high multi-racial populations. You expect more minority teachers in the program. Nothing in the report explains what appears to be a discrepancy between intent and actual practice. What would you do?

Vignette B

On a site visit to a Teacher Research Participation Program, you see some instances in which teachers appear not to have ongoing contact with their mentor scientists. In one case the scientist claims he was too busy to devote much time to the teachers. In another case the scientist was given temporary duty off site in the second week of the summer program, and no one else has been assigned to the teacher. In a third instance the scientist was promoted, and her replacement does not seem interested in having teachers in the lab. How do you handle this situation?

Vignette C

You have just finished a documentation review and selected telephone interviews of all the Teacher Development Programs that you oversee. In a conversation with the other project directors in your office you realize that you are all concerned about how your grantees are completing the templates, which is a program requirement. In some cases there are few data. Some program directors may be completing the templates themselves without conducting

interviews or gathering data from participants, scientists, and other program staff. Sometimes the templates and the data analysis reports have little relationship to one another.

As some of you ponder how to address the concern, your branch chief asks you to help plan the agenda for the annual Program Directors' Meeting. A "how to" session on completing templates would allow you to stress the agency's goals for using profiling methodology while helping grantees develop skills to use profiling better in their program improvement work. You also know that unless the grantees see profiling as valuable and the need to improve their skills as a worthwhile investment of their time, not much learning will take place at this session — if people show up in the first place. What do you do?

Vignette D

In discussing your work with another Headquarters staff person, you learn of his experience with a site conducting a student program that, in the opinion of your colleague, served its own purposes but was not consistent with the goals and objectives of the agency. Your colleague explains that he called the program director, indicated the discrepancy, and told the director to "fix it" or he wouldn't be able to support the program's future funding. At August program review time your colleague is asked to comment on the program's progress and outcomes after his recommendation that funding be reduced. The program itself has gotten noticeable press coverage lately for its innovativeness and the involvement of minority group students who have performed way beyond expectation. To say the least, it is an embarrassing moment. How would you have handled this differently?

Vignette E

In your review of a profiling package from a systemic program in its first year, you note that a significant number of Effective Practice items are not being addressed. Since this program is a partnership of a local university, two school districts, and your grantee, not every partner has to carry out every function. However, all core functions of a systemic program (as delineated in the template) should be addressed, as appropriate, by one or more of the partners. For example, there seem to be some deficiencies in items under the component "Changes in Policies and Support for Reform" in that the two districts have not made changes that allow them to fully support the systemic program. Your grantee says her hands are tied because she has no control over what the school districts do. What do you recommend?

5. The 25 Most Commonly Asked Questions about Profiling

For the past few years we've been keeping track of the questions about profiling that we're most frequently asked by Headquarters staff. Here are the 25 most common ones with the answers. You can gauge how much you have learned by how many of these questions you can answer yourself.

1. *What is the goal of profiling?*

Directors can see if their programs contain the elements of Effective Practice. If a program does contain all of the elements, it's most likely to be a better program than one that contains only three-quarters of the Effective Practice items.

2. *What makes profiling different from other approaches to formative evaluation?*

Profiling is based on a discrepancy model, a method of program evaluation that has been well established. What makes this approach to profiling different is the addition of the Effective Practice items. The developers drew from research and the experience of people who have conducted certain types of programs to say "These are the components that your program needs to have if it's going to be effective." In other words, we've set a standard. An effective program is no longer somebody's best guess or personal preference.

3. *I keep getting the terms mixed up. What's the difference between a component and an item?*

A component is a major aspect of Effective Practice. Program administration and evaluation, for example, are components. Items are the individual characteristics that comprise each component. These are the specifics of Effective Practice.

4. *What if a program doesn't intend to carry out some Item of Effective Practice? Should the item be deleted, left blank, or what?*

There should be a statement in the template that the program does not intend to incorporate the item of Effective Practice at this time. That's sufficient for the template. The report that accompanies the template should explain why. Items should not be omitted without explanation.

5. *How can I be sure that a program's version of the Intended column is an authentic version of the Effective Practice item?*

Sometimes you may not be able to unless you are knowledgeable and experienced regarding the program you oversee. We encourage project officers to make site visits to see a variety of programs in action. As your experience base grows, you'll know whether the description in the Intended column fulfills Effective Practice. Until then, you can ask your grantee questions or check with other project officers who know the programs well.

6. *How do I know how the Intended and Actual columns were completed?*

The cover sheet on the template should tell you how the data were gathered and who completed the template. If that information is missing, call your grantee and ask. Be skeptical of only one data gathering procedure and/or a single person completing the template based on his/her own impressions.

7. *Why are there not supposed to be any evaluative comments in the Actual column?*

The data in the template are purely descriptive. The Intended column captures what the program planners wanted to do, and the Actual says what happened. In other words, "what we expect" and "what was" are described without evaluative comment. The template is simply a data collection device. The analysis and interpretation come in the accompanying report. This is common practice in terms of first gathering data and then analyzing and interpreting them.

8. *What if I find that the program staff have made major changes in the Effective Practice column, deleting some items and adding others?*

You need to find out what your grantee's intent was. Were these changes made for a program that has an existing template, or has the grantee adapted an existing template for a program for which no template existed? If there was no template for your grantee's program, then how was this one

constructed? Designing new templates is a complicated process involving a great deal of time and effort. An adaptation should be accompanied by a set of research-based references. How appropriate is this template for the grantee's program? On the other hand, if your grantee has simply made some changes in an existing template that was designed for his/her program, then they are probably not legitimate. Someone may be doing some tinkering to make a program look good.

9. *What do I do if I think that the responses on a template are what the program staff want me to see rather than an accurate description of their activities?*

The first thing to do is to check out the environment in which the program is being administered along with your personal relationship with your grantee. How are grantees treated by the project officers? Do the project officers keep the grantees informed and give them straight answers in a timely fashion? Have grantees experienced project officers using information against them? And what's your personal relationship with your grantee? Do you trust one another? If not, why? If your grantee is not being honest, it's probably because one or more people in the organization are afraid of being truthful. Unless a trusting climate exists, requiring your grantees to complete templates is probably of little value.

10. *What do I do if the director of a program sends me a template without the other pieces of the program packet?*

Call the director and ask him or her to send them. That's much better than your trying to make sense out of a template without the contextual pieces and the data analysis. Not sending them in may have been an oversight or the result of some miscommunication. If the director does not follow through, then you may have to resort to more forceful strategies.

11. *What happens if a program director fails to complete a template or turn in a profiling packet?*

What's the basic requirement? Is profiling mandatory or voluntary? If compulsory, does your grantee understand this requirement? Treat this incident just as you would any other in which a program director did not meet the requirements of the program. On the other hand, you may also want to look at the environment. Why would a grantee not send in a profiling packet? Is she or he afraid? If so, why? Perhaps requiring grantees to submit profiling packets should be suspended until some problems at Headquarters can be corrected. Before you can resolve this situation, you

need to figure out what's going on, especially why the program director didn't turn in a profiling packet in the first place.

12. *How much actual content or subject matter knowledge do I need to have to adequately review a template?*

The more the better. However, you can get along with less if you understand profiling, can ask good questions of your grantee, and rely on more experienced colleagues if you run up against something you don't understand.

13. *What do I do if there is no existing template for a program that our agency is planning to issue an RFP for?*

Are you prepared to create a new template or hire a group to construct one for you? Either is possible, but the task is a big one. The process of creating a template is outlined in Chapter 2 of *A User's Guide to Program Templates*, (Mary Ann Scheirer, Editor, from the New Directions for Evaluation Series, Jossey-Bass Publishers Inc., San Francisco, 1996.) It takes knowledgeable people who are experienced with the type of program in question. They need to follow a structured process for reviewing literature and identifying Effective Practice based on the research and the experience of practitioners. After a draft has been developed, there is a pilot test followed by revisions. All this occurs over several months. We don't want to discourage you. It can certainly be done, but be realistic about what you're getting into.

14. *Do program staff need to complete a template for each of their programs every year?*

Absolutely not. Once a program has stabilized and program staff are satisfied with its design and implementation, there is no need to complete a template every year. Grantees may want to stagger their scheduling so that programs are profiled at certain intervals. The decision to profile is based on the programs' needs rather than some arbitrary schedule.

15. *Is it a good idea to require grantees to use profiling?*

That's a hard question to answer. It depends on the situation. First, there needs to be a template that's appropriate for the program the grantees are implementing, and they need to be skilled in

using the methodology. Both Headquarters' staff and grantees need to be committed to profiling and see the value of the process. The atmosphere needs to be such that the grantees can trust Headquarters' staff to use the information appropriately. Finally, profiling can be one measure of accountability that Headquarters requires of the grantees, but it should not be the only one. If these conditions exist, then requiring grantees to use profiling makes sense. If not, requiring profiling may not be appropriate.

16. *If Headquarters wanted to require their grantees to use profiling for formative evaluation, how much training is necessary for them to become proficient in the approach?*

That depends on how much they know about various approaches to evaluation, including their familiarity with a discrepancy model. Generally two days of training per template with follow-up support as they use the template should be sufficient.

17. *How would Headquarters' staff use a template in starting a new program?*

They could base their RFP (Request for Proposal) on the components of Effective Practice for the new program. Proposals would be judged, in part, on the degree to which they incorporated components of Effective Practice.

18. *How would Headquarters' staff use a template if it received a budget reduction and had to cut back its programs?*

The Headquarters' staff can look at whether they can support grantees at a level that will allow them to implement effective programs. If not, then what program or programs should be cut? If a Headquarters' staff relies on profiling data, they'll be less likely to use the typical strategy of reducing all programs by a certain percent. This strategy often destroys programs so that they can not operate effectively. When faced with budget cuts, a better strategy is to eliminate one or two types of programs altogether than to make across-the-board cuts.

19. *What's the difference between the way a project officer and a technical assistance provider would use data from the templates?*

This is a complex question that requires a bit of context. Federal agencies differ in the role that they give their project officers. In some instances, their role is that of insuring compliance. The project officer makes sure the program functions the way the Headquarters' staff expect it to function. And if it doesn't, the project officer may eventually defund the program. Other agencies may have a technical assistance branch to balance their compliance function. Here a group of individuals help their clients or grantees function more effectively and meet agency guidelines. They provide technical assistance — consultations, on-site visitations, training, and materials, for example. They may also attempt to network their clients or grantees so that they can learn from one another. And there's one more option. In a few agencies, the project officer has both roles — that of compliance as well as technical assistance.

Our role here is not to say which one of these approaches works best but to answer the question: how does the way a project officer and a technical assistance provider use profiling data differ? A project officer responsible for compliance is concerned that the program is functioning the way it should, and profiling gives him or her some of the needed data. A technical assistance provider works closely with a program director to see what aspects of the program need to be improved and how that improvement can take place. A person carrying out both roles simultaneously can do either although it's a very delicate balancing act.

20. *Is it appropriate for people attempting to secure initial funding or continuation funding to base their proposal on a template?*

Not only is it appropriate, it's a smart idea. Are you worried about all proposals looking the same? If so, don't. There are so many ways of translating Effective Practice that one program will not look like any other.

21. *How could I help our grantees become more skillful in profiling?*

If you require your grantees to use profiling, you have an obligation to help them develop an appropriate level of skill. The extent to which you do so, however, may depend on whether your role is one of compliance or technical assistance. At minimum, you can put your grantees in touch with resources that can help them strengthen their skills. On the other hand, you can schedule training and provide follow-up support, all at your expense.

22. *Do templates exist other than the four presented in this manual?*

To some extent. There is a template for new organizations that has been pilot tested in one setting. This template shows great promise and could be used with a new organization if the profilers were experienced in the methodology. There is also a draft of a School-to-Work template that needs additional development and pilot testing. If you are interested in either of these templates, contact the National Center for Improving Science Education in Washington, DC at (202) 467-0652.

23. *Should a program that uses profiling show better results in its first year than a program that doesn't?*

What do you mean by results? Results usually refer to something beyond the operation of a program, e.g., the program's impact. Most programs do not show results in the first year or two. However, a program that meets the Effective Practice criteria is more likely to achieve the desired results within the appropriate time frame, whatever that may be.

24. *If the assistant secretary of our agency wants "proof" that our programs are having some impact, can I provide a summary of data from the templates?*

Whether or not profiling data are sufficient depends on what your agency official means by "proof." By summarizing data from the templates, you can show that, for example, 80 percent of your funded programs have incorporated 90 percent or more of best practice items. If your programs require several years of full implementation to produce results, profiling data may serve as an interim measure. Research indicates that programs operating according to Effective Practice are more likely to achieve significant long-term results. If, however, your agency official wants data on student achievement, students taking advanced courses, students opting for careers in mathematics and science, then you need different, summative, evaluation data. Profiling is not sufficient. Policy level people frequently want summative evaluation data before it's possible to produce such data. Part of your job may be to educate individuals who do not understand how long it takes to bring about significant change.

25. *If profiling is so labor intensive, is it really worth the effort?*

Only grantees and project officers can answer that question. From our experience we can tell you that profiling leads to changes in how programs operate, bringing them more in line with Effective Practice. The end result is better programs, and why they're better is readily apparent. Profiling is one relatively simple way in which a program can establish accountability. Perhaps the issue is not whether to profile or not but when. Remember that every program does not have to be profiled every year. (See Question 14.)