

5

DEFINE PART 1

Understanding the Program

By failing to prepare, you are preparing to fail.

—Benjamin Franklin

Upon completion of this chapter, you should be able to

- Describe the purpose of embedded evaluation.
- Discuss resources you can use to understand your program.
- Create program goals worded as outcome statements.
- Identify a program's primary strategies.
- Explain a program's theory, linking strategies to goals.
- Describe contextual conditions necessary for a program to be successful.
- Explain the difference between theories of change (ToC) and theories of action (ToA).

5.1 EMBEDDED EVALUATION

Charles Darwin said, “It is not the strongest of the species that survive, not the most intelligent, but the one most responsive to change.” Being responsive to change acknowledges that learning is required to improve and perfect. Planning is not a one-time, up-front activity; it is a continual process of refining and adapting. Such planning and adaptation are not unique to living creatures, but are also a necessity for the programs and processes that human beings rely upon. Programs across many fields focus on improving services for people. For example, a higher-education program might

focus on increasing access to college for low-income youth; a behavioral health program might implement a new counseling intervention intended to decrease seasonal affective disorder; an environmentally focused program might establish recycling centers at local schools to increase the volume of recycling within a community; and a nutrition program might include a new campaign to encourage youth to reduce fast-food consumption. Programs in many areas, including education, health, social services, and criminal justice, are aimed at helping people. As such, the leaders of such programs have a responsibility to understand what the program does, why it does it, and how the program is affecting the people involved, so that the program can be continually improved to benefit the people it serves. The purpose of evaluation is to determine if programs are indeed helping people, including the extent to which they are effective and for whom, as well as under what conditions and in what ways they work best. Chapters 5–11 of this textbook present a framework to aid you in embedding evaluation into program planning, design, and decision making to foster such continuous improvement.

5.1.1 Continuous Improvement Centered, Theory Based, Utilization Focused

As introduced in Chapter 1 and described in Chapter 4, **embedded evaluation (EMB-E)** is a comprehensive approach aimed at building evaluation into a program's design and operations. EMB-E is founded upon continuous-improvement principles (Deming, 2018) and is a theory-based approach to evaluation (Weiss, 1998). Because of its focus on continuous improvement and its consequent reliance upon partnerships with stakeholders to focus data collection on metrics that enable continuous improvement, EMB-E also incorporates aspects of participatory (Cousins & Earl, 1992) and utilization-focused evaluation (Patton, 2013).

EMB-E is an approach and also a framework. The framework includes defining objectives and goals as measurable outcomes during theory explication, building a logic model to represent the program's theory, creating indicators based on logic model components, and developing an evaluation matrix. The evaluation matrix is an extension of the logic model that drives data collection and analysis. Finally, the framework includes stakeholder-focused interpretation and use-intended recommendations, to inform the continuous-improvement cycle.

Over the next few chapters, you will be led step-by-step through EMB-E, from documenting how and why your program works to using your evaluation results. It may be useful at this point to refer back to the embedded evaluation framework presented in Chapter 1. This framework is based on the following five steps:

- Step 1. DEFINE: What is the program?
- Step 2. PLAN: How do I plan the evaluation?
- Step 3. IMPLEMENT: How do I evaluate the program?

Embedded evaluation (EMB-E):

a comprehensive continuous-improvement-centered, theory-based, utilization-focused approach; a framework to build evaluation into your program's design and operations, making information and data the basis upon which your program operates and thus fostering continuous improvement.

Step 4. INTERPRET: How do I interpret the results?

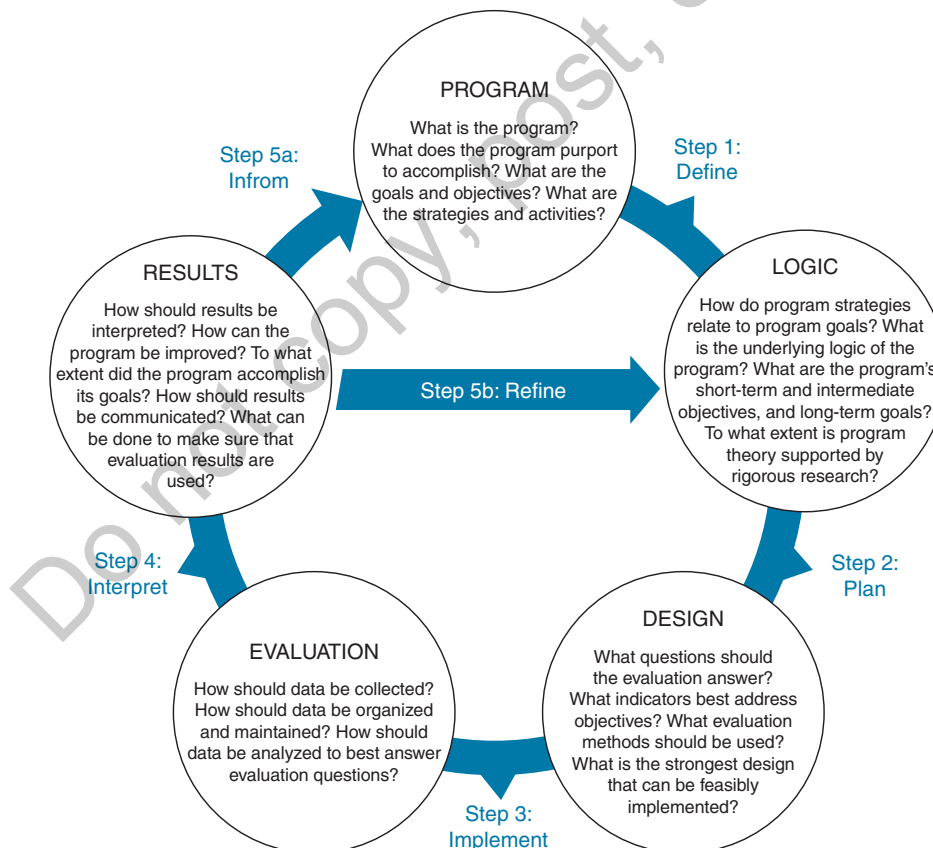
Step 5. (a) INFORM and (b) REFINE: How do I use the results?

Step 1 will be covered in this chapter (Understanding the Program) and in Chapter 6 (Modeling the Program). Step 2 will be addressed in Chapters 7 (Planning the Evaluation) and 8 (Evaluation Design). Chapter 9 (Implementing the Evaluation) and Chapter 10 (Analyzing the Data) will focus on Step 3. Chapter 11 (Interpreting the Results) and Chapter 12 (Using Evaluation Results) will concentrate on Steps 4 and 5, respectively. The embedded evaluation model is provided in Figure 5.1.

5.1.2 Dynamic and Cyclical

By now in your study of evaluation, I am sure you would agree that evaluation is a dynamic process. While the embedded evaluation framework leads the evaluator through a stepped process, these steps are not meant to be items on a checklist. Evaluation is not a linear process

FIGURE 5.1 Embedded Evaluation Model



and EMB-E steps are not rungs on a ladder culminating with the final step. As long as a program is in operation, evaluation should not end. Evaluation is not *one and done*. The context within which a program operates is ever changing, just as the world we live in is ever changing. Evaluation findings for a certain group of people, in a particular context, at one point in time may not be relevant for another group of people, in a different context, at a later date.

The steps of EMB-E are components of the evaluation process that impact and influence each other. Information learned in one step may lead to refinement in a previous step. Thus, as information is gathered and lessons are learned, the program is improved. That is, EMB-E is a cyclical approach; it is grounded in continuous improvement cycles. Embedded evaluation aims to enable program staff to build and implement high-quality programs that are continuously improving, as well as to determine when programs are not working and need to be discontinued.

5.1.3 EMB-E Steps and Nodes

Before moving on to Step 1 (Define), I would like to explain the EMB-E graphical illustration in a little more detail. As described above, there are five steps. There are also five nodes in the illustration. Each node is the result of the preceding step; it is the product of the step. For instance, defining the program (Step 1) results in the program's logic (node). At the conclusion of planning the evaluation (Step 2), the evaluation design is created (node). Once this design is implemented (Step 3), evaluation data are collected (node). Once the data are interpreted (Step 4), evaluation results are available (node). Finally, these data are used to inform program staff regarding effectiveness and to refine the program for continuous improvement purposes (Step 5). It should be noted, however, that refinement can occur at any step. For simplicity's sake, Step 5 links results to both program and logic, yet lessons learned during implementation of the evaluation may prompt you to return to planning, or findings during interpretation may raise questions that indicate a need to reexamine program definition. Thus, the model is meant to be a resource for you and it is my attempt to illustrate the ongoing, continuous cycle of evaluation with some simplicity, but it should not be seen as an inflexible ideal that constrains how an evaluation is implemented. As evaluators, we need to be flexible, and even creative, as we strive to understand the program, listen to the needs of stakeholders, and design an evaluation that provides a program's leadership with the information they need for decision making.

5.2 UNDERSTANDING THE PROGRAM

Because understanding the program is the foundation to understanding its effectiveness, the first step in conducting your evaluation is to understand what you want to evaluate. Whether you are evaluating a new program or a program that has been operating for some time, it is important to begin with the basics, that is, understanding how the

program works. Do not rely on what you already know about the program or what you believe the program intends to accomplish. Instead, take what you know, and build on it with information from multiple sources. By doing this, you will gain a full understanding of the program, including multiple perspectives and expectations, as well as basic underpinnings and complex inner workings.

5.2.1 Previous Evaluations and Program Documentation

So, how do you find out more about the program? You may want to investigate whether the program has undergone any rigorous *previous evaluations*. If well designed and well carried out, previous evaluations can provide useful information regarding how a program operates. Start by searching the literature and internet for both published and unpublished evaluation reports of the same or similar programs. Such reports can not only inform you of important elements of the program, but can also give you valuable information regarding lessons learned, issues to consider, and potential evaluation instruments or methods that might be used in your evaluation.

For an existing program, a source from which you can learn more about the program is *existing documentation*. Documents such as strategic plans; training materials; meeting minutes; and federal, state, or local requirements may have useful information for understanding the program and the context in which it was implemented. It is also a good idea to familiarize yourself with any program materials. If the program is funded by a grant, an important place to start is the grant application. Grantors typically require applicants to delineate program goals and strategies. You will need to read the application carefully to tease out the goals and strategies. Often, stated goals are not really goals but rather strategies, while goals themselves may be indirectly alluded to in a project narrative. For instance, an applicant might have “provide families with healthy food alternatives” as a goal. In reality, this is a strategy meant to address a goal such as “increased intake of healthy foods” or “improved eating habits” or “improved health.”

Another good source of information on an existing program is the *internet*, including a program or organization’s website. Like grant applications, however, you will need to read through all information on the site to ascertain the program’s true goals and strategies, and perhaps distinguish them from the program’s stated goals and strategies. Very rarely does program documentation have strategies and goals clearly articulated. As the evaluator, you will need to pay careful attention to text that seems to describe a program activity or strategy and information that alludes to the reasons why a program was implemented.

5.2.2 Conversations, Interviews, and Group Discussions

Further, you may want to *talk with people* who have experience with the program, such as community members or partnering organizations, as well as program staff from agencies that have implemented the program. One of the best pieces of advice I received as an

early evaluator was “work the phone.” At the time, the internet was still fairly sparse and certainly not the amazing resource it is today. Do not be afraid to reach out to people, even if they seem out of reach. I am sure you have heard the phrase “we all put our pants on the same way.” You might be surprised by the response you receive from the leader of a large organization, the president of a nonprofit, a high-ranking public official, or an established, well-known researcher.

I find it very productive to email individuals and typically receive timely responses to my inquiries. Though, as my daughter reminds me, email is *so yesterday*. What?! Maybe to the younger generation it is an outdated mode of communication, but for the workplace, it is still very relevant and effective. In this day and time, perhaps it would be more appropriate to say, “Work your social media,” but do not forget that the phone (and email) can be your friend.

If you have experience with the program, you should absolutely document what you know, but also include others in your information gathering. Consider conducting *interviews and group discussions* with program staff to learn more about their insights into the program, how it operates, and what goals it intends to achieve. Instead of asking staff to recite the program’s stated goals and strategies, discuss what the program hopes to change and what the program does or intends to do to bring about that change. Interviews with people familiar with a program are invaluable to understanding program expectations and activities.

5.3 DELINEATING GOALS AND STRATEGIES

Once you have a good understanding of the program, the next step is to document more systematically what you know about the program. The first component in explaining the program is to describe the program’s goals; the second component is to delineate the program’s strategies.

5.3.1 Documenting Program Goals

A **program goal** is a broad, general statement of what a program intends to accomplish or its desired result. Goals should reflect a shared understanding among program stakeholders as to what the program should achieve. What does the program intend to accomplish? How would you know if it worked? If the program were a success, what would have happened? What would have changed?

Program goal: a general statement of what a program intends to accomplish or its desired results.

Goal statements should reflect the overall intent of the program or a shared vision of what the program is supposed to accomplish. In comparison, objectives tend to be more specific and are often short term or intermediate in time span. If objectives are known, record them; however, at this point in program planning, broad, long-term goal statements are sufficient.

A program may have one or two goals, or it may have many goals. For example, a program focused on community conflict resolution may have a primary goal of improving community relations. On the other hand, for a program focused on at-risk youth, goals might be to decrease risky behavior, decrease youth arrests, and increase the high school graduation rate. Goals can focus on any facet of life. For instance, goals may have to do with changing the behavior of individuals, altering their quality of life, impacting knowledge of program participants, affecting attitudes, adjusting living or environmental conditions, or shifting the level of involvement or safety in the community.

In EMB-E, program goals should be worded as **outcome statements**. Later, the indicators and targets you create to address program goals will be SMART (specific, measurable, agreed upon, realistic, and time bound). I mention this because many of you have likely heard of SMART goals. The SMART framework (Doran, 1981) will be described in Chapter 7 in the discussion on creating indicators for goals and objectives. However, for our purposes program goal statements should begin with an outcome word (such as increase, decrease, improve, etc.) that indicates what the program should accomplish. Avoid starting goal statements with nondescript words, such as help, show, and make. Outcome words should focus on what the program itself will *do* as part of its strategies and activities, not on what the program *affects*. Thus, program goals should focus on what will be achieved after implementation of the program.

When documenting the program's primary goals, ask yourself the following: If the program were successful, what observable change would likely be seen? Once again, programs should be designed not around what the program does, but on what the program intends to accomplish. The services provided by the program, its strategies and activities, are important and will be the focus of the next section. However, it is important to note that what the program does is a means to an end. This end is the program's goal or goals. The program's design, its implementation, and its evaluation should all focus on these goals. That is, a program should be designed around its goals, not its strategies. The goals are the destination; the program design maps out the program's route to reach this destination. Table 5.1 displays some sample goal statements.

Outcome statement:

a statement of what the program intends to accomplish that begins with an outcome word. While goals are worded many different ways, embedded evaluation is based on goals being worded as outcome statements.

5.3.2 Identifying Program Strategies

Once you have documented what the program intends to accomplish, the next component is to document the program's strategies. How will the program accomplish its goals? What strategies will be used to achieve the goals? What activities will need to be put in place for the program? Does the program have activities that occur in the community, in the home, at the workplace, or in a combination of these settings?

Program strategies:

activities the program puts into place to accomplish its goals. Strategies might include services, materials, training, resources, or a cluster of activities.

Program strategies are activities or clusters of activities. Strategies might be access to financial and other resources, or provision of support services, professional guidance,

TABLE 5.1 ● Goal Statement Examples

If I want to	The goal(s) might be to
Change the behaviors of community members	Improve community self-monitoring Increase community involvement Improve civic leadership
Change the attitudes of community members toward their own community	Improve attitudes toward community Decrease atomization within the community Increase feelings of community ownership

training, skill development, mentoring, or counseling. Strategies might be ongoing throughout the program or drawn on at various stages during the program's operation. Listing all strategies used as part of the program is important to explaining later how and to what extent the program's goals were met.

If you are embedding evaluation into an existing program, examine what the program does. If you are embedding evaluation into a new program, examine what the program proposes to do. Either way, document the major strategies of the program put in place to accomplish the program's goals. Whether you are working with a new program or an existing program, the process of understanding the program is the same. Spending the time to understand the program and to document its strategies designed to meet goals is critical not only to operating the program, but also to designing an effective evaluation.

Documenting strategies may appear to be a simple inventory of things to do. It is important to note, however, that the strategies a program implements are not stand-alone activities on a checklist, but rather interconnected activities designed to work together to meet a common goal or goals. We will have more on this interconnectedness later when we discuss implementation evaluation in Chapter 7. For now, to understand the program for the purpose of designing the evaluation, the task is simply to identify and document the strategies. For an example of a how to document a program's goals and strategies, see the "In The Real World" example in this chapter.

If you are following along with your own program, at this point you have documented your program's goals, as well as the strategies that will be employed as part of the program to meet these goals. The next task is to relate program strategies to program goals. Important questions at this stage are: Why should the program work? Why should implementing this set of strategies meet the goals set for the program?

IN THE REAL WORLD . . .

The **DC Central Kitchen** provides thousands of free meals every day to homeless shelters, transitional homes, and nonprofit organizations in and around Washington, D.C. The program has three primary goals: (1) reduce hunger; (2) increase employment; and (3) increase access to healthy foods.

The **DC Central Kitchen** has five primary strategies it uses to address these goals: (1) meal distribution

to area organizations; (2) culinary job training for homeless adults; (3) food recycling to use leftover and surplus food; (4) providing school meals to low-income children; and (5) distributing fresh produce and healthy snacks to corner stores in area food deserts.

Sources: <http://www.dccentralkitchen.org/>



QUICK CHECK

1. The first step in program evaluation is to
 - a. Collect your data
 - b. Design your evaluation
 - c. Outline your evaluation report
 - d. Understand your program
2. Once you have researched and found out as much information as you can about the program, the next task should be to . . .
 - a. Collect your data
 - b. Design your evaluation
 - c. Document your program's goals
 - d. Determine if the program is effective
3. A program intends to impact the anxiety college students feel at exam time. What might be a goal for this program? What strategies might the program use to address this goal?

Answers: 1-d; 2-c; 3-answers will vary (example goal: decreased anxiety among college students; example strategies: coping strategies workshops and on-call counseling services)

5.4 EXPLAINING THE PROGRAM THEORY

The linkages between program strategies and program goals are assumptions about why the program should have the desired outcomes. These underlying assumptions, taken together, are the basis of the program theory. That is, the **program theory** is the reasoning behind why the program should work. Suppose it is believed that holding town meetings and

Program theory: the theory as to why the program should work. It is a set of underlying assumptions that explain the linkages between program strategies and program goals.

providing conflict-resolution training to community members would improve community relations. Or suppose it is assumed that creating a youth community center, providing engaging and relevant after-school and summer activities, employing counselors to work with youth on interpersonal skills, and making tutors available for homework help will improve the outcomes for at-risk youth, including reducing risky behavior and decreasing the high school drop-out rate.

In documenting the program's theory, take each program strategy and examine how it relates to the program's goals. What makes you believe that the strategy will result in the intended outcomes? What changes should occur during and after implementation of strategies that will lead to reaching the program goals?

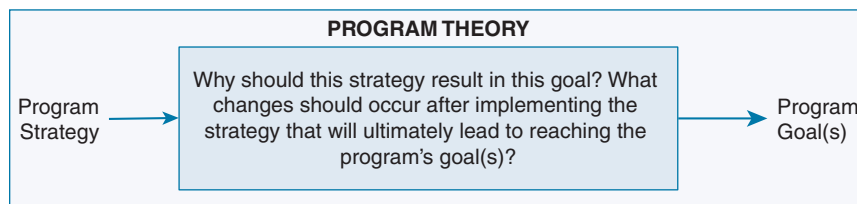
Take the first example above, of implementing the strategy to hold town meetings. It is hoped that this would lead to the early outcome of residents attending those meetings. If the outcome of residents attending the meetings is achieved, what intermediate outcome might this lead to? If residents attend the meetings, it might be hoped that they increase their communication with one another. If there is increased communication, it could be that residents will have an increased sense of belonging to the community.

Likewise, why would the strategy of providing training to community members to resolve conflicts peacefully lead to improved community relations? It is hoped that if conflict-resolution training is offered that residents will participate. If more community members are trained, it is logical to believe that the conflict-resolution skills among residents will improve.

Finally, theoretically the increased feelings of belongingness and improved conflict-resolution skills among community members realized through the town meetings and training strategies will likely lead to improved community relations. As you can see through this example, program theory can be flushed out by continually asking the question, "If I implement this strategy or achieve this objective, what outcome should I see next?" See the framework in Figure 5.2 for relating program strategies to program goals.

When examining the linkages between program strategies and goals, try to determine the basis for these assumptions. Are the assumptions grounded in solid research? Or, are

FIGURE 5.2 ● Program Theory Framework



**QUICK CHECK**

Try documenting the program theory for the following program:

The strategies include

- Creating a youth community center,
- Providing engaging and relevant after-school and summer activities,
- Employing youth counselors to mentor at-risk youth,
- Working with youth on interpersonal skills, and
- Making tutors available for homework help.

The goals are

- Reducing risky behavior among at-risk youth and
- Decreasing the high school drop-out rate among at-risk youth.

Answers: Answers will vary. An example of a program theory for the first strategy is as follows. Creating a community youth center for at-risk youth will lead to more at-risk youth attending the youth center. More youth attending the youth center will result in decreased time spent unsupervised. Decreased time spent unsupervised will lead to decreased opportunity to engage in risky behavior. A decreased opportunity to engage in risky behavior will lead to a reduction in risky behavior among at-risk youth.

they based on emerging knowledge or personal experience? Documenting the relationship between a program's strategies and its goals explains the program design and is the basis for embedding evaluation into the program. Additionally, understanding whether this relationship is based on solid research or emerging knowledge will aid you when designing your evaluation. Programs that are based on emerging knowledge or are innovative in their approach should have a more extensive and rigorous evaluation than a program that is developed on solid research and shaped from previous evaluation evidence.

The process of describing the program's theory and delineating the assumptions that underlie the program will be further explored in Chapter 6, when the program's theory is documented using a logic model. See the case study in this chapter for an example of documenting program theory.

5.5 DETERMINING CONTEXTUAL CONDITIONS

Most programs rely upon certain **contextual conditions** being met and resources being readily available to operate the program. If the program you are evaluating assumes that a certain infrastructure is in place or that specific materials are available, you should identify and list these conditions and resources when planning your evaluation. If a program is built upon the presumption that trained counselors, or other skilled professionals, are

Contextual conditions:

resources, infrastructure, facilities, services, or any other conditions that are necessary for the program to be successful, but are not part of the program itself.

available for hiring in the area in which the program will be implemented, this should be listed as a contextual condition. Further, if the program operation assumes that facilities are available for convening people or providing education or that a partnering organization will provide services critical to the program, these should be included as contextual conditions as well. Any resource that is necessary for the program to be successful, but that is not part of the program itself, should be clearly documented.

In the previous section, a program was introduced to improve community relations. Two of the primary strategies were to hold town meetings and provide conflict-resolution training to community members. Contextual conditions, or resources necessary to implement the program that are not part of the program itself, might be a facility in which to hold town meetings and a location in which to provide conflict-resolution training. Another contextual condition might be the availability of trainers skilled in conflict resolution. If the location of town meetings and/or training is such that community members cannot walk to the facility, the availability of transportation is another important contextual condition to consider. If you find that the necessary contextual conditions are not in place, such as the availability of convenient public transportation, including the provision of transportation as a strategy of the program itself might be a consideration.

Note that contextual conditions are different from contextual influences. Contextual conditions are assumptions about what resources and infrastructure are necessary for a

CASE STUDY

Youth Abstinence-Plus (YAP) Program

For decades, researchers and practitioners have debated the use of abstinence-only programs versus sexual education programs as a means to decrease the incidence of unintended pregnancy and the spread of sexually transmitted infections (STIs) among youth. Even with the growing evidence that abstinence-only programs are not effective at delaying sexual activity or reducing STIs, these programs became very popular during the early 2000s. In fact, some researchers found that abstinence-only programs had negative unintended consequences related to denying youth access to information about safe sex and protection from disease. On the other hand, sexual education programs have been criticized as promoting sexual activity, though little evidence supports this claim.

An alternative to these two approaches is an abstinence-plus program that combines safe sex education with a strong message that promotes abstinence. Over the next few paragraphs, we will design a program called Youth Abstinence-Plus (YAP) that includes a focus on abstinence, education regarding safe sex for those youth who find themselves in sexual situations, and access to contraceptives for youth who plan to engage in sexual activity.

From the above description, we can determine that the YAP program goals are to

1. Decrease the pregnancy rate among youth.
2. Decrease the spread of sexually transmitted infections (STIs) among youth.
3. Increase the number of youth who choose sexual abstinence.

The YAP program strategies are the provision of

1. Materials on the benefits of abstinence.
2. Education regarding safe sex.
3. Access to contraception.

So, our initial program theory is

- Providing materials on and a message about the benefits of sexual abstinence among youth will increase the number of youth who choose sexual abstinence, which will lead to a decrease in the pregnancy rate among youth and a decrease in the spread of STIs.
- Providing youth with education regarding safe sex practices will decrease the pregnancy rate among youth and decrease the spread of STIs.
- Providing youth access to contraceptives will decrease the pregnancy rate among youth and decrease the spread of STIs.

The next step is to expand on the program theory, make the objectives leading from the strategies to the goals more specific, and explicitly state the program's underlying logic. Ideally, the program staff, key stakeholders, and evaluation staff would hold a series of meetings to discuss why the program's strategies will result in the goals that were specified. The following is the expanded logic that might evolve from such meetings:

- Providing **materials on promoting sexual abstinence** and a message about the benefits of sexual abstinence among youth will increase access to materials on abstinence, leading to an increased number of youth who receive the message about the benefits of abstinence, leading to an increased number of youth who understand the benefits of abstinence. An increase in the number of youth who understand the benefits of abstinence will lead to an **increase in the number of youth who choose sexual abstinence**, which will lead to a **decrease in the pregnancy rate among youth** and a **decrease in the spread of STIs**.
- Providing youth with **education regarding safe sex practices** will increase access to education regarding safe sex practices, leading to an increase in the number of youth who receive education regarding safe sex practices, which will lead to an increase in the number of youth who understand the benefits of safe sex practices. An increase in the number of youth who understand the benefits of safe sex practices will lead to improved safe sex practices among youth who are sexually active. Improved safe sex practices among sexually active youth will **decrease the pregnancy rate among youth** and **decrease the spread of STIs among youth**.
- Providing youth with **access to contraceptives** will increase the number of youth who have access to contraceptives, which will increase the number of sexually active youth who obtain contraceptives. An increase in the number of sexually active youth who obtain contraceptives will increase the use of contraceptives among sexually active youth, leading to improved safe sex practices among sexually active youth. Improved safe sex practices among sexually active youth will **decrease the pregnancy rate among youth** and **decrease the spread of STIs among youth**.

program to reach its goals. **Contextual influences** are factors in the environment that may affect the program's operations and success. Contextual influences may be political, economic, social, or technological (PEST). The PEST framework is a structured method of examining the various influences within the program's environment and considering how they might impact the program (Aguilar, 1967). At this point in EMB-E, we are focusing on contextual conditions. However, it is always a good idea for program staff to conduct a PEST analysis prior to a new program being implemented and routinely during program operation.

5.6 PROGRAM THEORY AND OTHER THEORIES

The term “theory” is used in many fields and in multiple contexts. At its core, a theory is simply a proposition or an explanation, describing why you think something occurs the way that it does. However, because the term is used so frequently and across disciplines, it is hoped that this section will clarify how program theory relates to and differs from other types of theory.

A **theory** is a system of beliefs intended to explain how something works. Merriam-Webster online adds that a theory is “a hypothesis assumed for the sake of argument or investigation.” Theories are common in science and are typically developed after a series of hypotheses have been tested. Thus, theories are often based on more than a hunch or an educated guess. Rather, findings from previous work or research are the foundation for the development of a theory. Innovation is founded on promising theories and based on promising practices.

Some well-developed theories in psychology are personality theory, cognitive-behavioral theory, developmental theory, and social-cognitive theory. Engineers use systems theory. Managers use motivational theory and leadership theory. Biologists have feedback theory. Sociologists have many theories, including symbolic interaction theory, conflict theory, critical theory, feminist theory, and game theory. The field of philosophy abounds with theories, including theories about truth and power. There are even theories related to political change, fiscal behavior, and communications.

Theories are not static; they are dynamic. Developing theory is a process. Hence, theories should evolve and improve as we learn more about how and why something works. Additionally, some theories have more evidence to support them than others, and it is important to know what kinds of evidence a theory is based upon. The stronger the evidence and the more tested the theory, the more confident you can feel in using the theory as the basis for a program. However, this does not mean that untested theories should not be used as the basis for a program. Rather, untested theories can lead to innovative programs. For programs based on untested theory, however, rigorous evaluation designs

Contextual influences: factors in the environment that may affect the program's operations and success; context can be examined using a PEST analysis, which explores political, economic, social, and technological influences.

Theory: a system of assumptions or beliefs intended to explain how something works.

are critical to shaping the program and determining its effectiveness. Evaluation design will be discussed in Chapter 8.

5.6.1 Program Theory Revisited

Programs and policies that are intended to improve the lives of people are based on a theory, though this theory is not always explicitly stated. If we view a program or policy as fact and do not question how well it works and for whom it works best, we could potentially do more harm than good in our effort to help people. Thus, evaluation is the science of understanding what works so that we can be confident the programs and policies we are using are indeed accomplishing what we set out to accomplish. Evaluation can be viewed as a systematic way of testing a theory related to how we can best serve people. The theory we are testing is called program theory.

As stated earlier in this chapter, program theory is focused on program goals. Program theory is helpful in understanding why the program should work (that is, why the program's strategies should result in the program's goals). Program theory is an outcomes-based description of the logic fundamental to the program.

Program theory has been used to explain programs for nearly half a century. Many evaluators have their own preferred way of writing the program's theory and representing the theory graphically. While a logic model is the most common way of illustrating program theory, logic models also vary in their detail and format (logic models will be discussed Chapter 6). Regardless of the way program theory is written or the format and detail of its accompanying model, the purpose is primarily the same: program theory outlines the assumptions underlying why a program should work, linking what the program does (strategies) to its long-term goals (worded as outcomes).

5.6.2 Theories of Change

A **theory of change (ToC)** describes how change occurs. A ToC can be narrative or pictorial. However, it is typically a general representation of how strategies relate to goals. ToCs are also referred to as causal models, as the model shows the theorized causal linkages between a program and its intended outcomes. However, the term causal is misleading. While the model can appear to show causal linkages between strategies, objectives, and goals, causality can only be claimed based on the design of the evaluation. That is, certain evaluation designs, due to the way in which participants are included in the evaluation, can approximate cause-and-effect relationships between program strategies and the outcomes of the program.

Theories of change are just that—theories. The evaluation design is used to test that theory by providing evidence, to the extent possible, that a relationship exists between what the program does and what is accomplished. Theories of change show theorized

Theory of change (ToC): a theory that describes how a change occurs; *program theory* is a theory of change.

associations; the evaluation design can potentially provide evidence of causal relationships. Causality will be further explored in Chapter 8.

Program theory is a theory of change. Program logic models, as mentioned above and covered in more detail in Chapter 6, are a graphical representation of a ToC, providing detailed outcome-focused information about how and why the change should occur. Theories of change are very useful in explaining *why* a program does what it does, as well as in designing the program's evaluation; they do not explain *how* the program is implemented. Thus, it is important to remember that a ToC, including program theory, is based on outcomes, results we would like to see, and not on how services are provided or activities implemented to reach those outcomes. If you would like to read more on ToCs, the Annie E. Casey Foundation has a useful guide that describes creating and using theories of change (Organizational Research Services, 2004).

5.6.3 Theories of Action

A **theory of action (ToA)** is the operationalization of a theory of change. While sometimes a ToA is used synonymously with a ToC, there are important distinctions. A ToA describes the processes through which change occurs and explains the means through which strategies are implemented. It focuses on the services provided to reach our intended outcomes.

Implementation theory is a theory of action. Implementation theory focuses on the service delivery aspect of a program (Nilson, 2015; Weiss, 1998). That is, it relates the objectives within the program's theory to program activities that must occur to address that objective. Implementation theory is a more operational theory and is intended for program delivery, as opposed to a program theory's representation of the intended outcomes of strategies throughout program implementation. Program theory and implementation theory work together to explain why and how a program works. While this text focuses on program theory as a way to embed evaluation into a program, the strategies that are part of a program's theory could be represented using implementation theory. A model of a program's implementation theory would guide program staff regarding what activities to deliver and at what stage in the program's operation to deliver them.

5.7 CONSIDERING ALTERNATIVE THEORIES

Theory of action (ToA): a theory that describes how a program is delivered.

Implementation theory: a theory of action that describes the activities that precipitate change.

If you are using Chapters 5–8 as a guide to design an evaluation, at this point, you have documented the program, including the strategies that will be part of the program and the intended goals of the program. You have also considered the assumptions as to why the strategies should result in achieving the program's goals. As mentioned in the previous section, these assumptions explain why the program should work and are the basis of the program's theory. Before defining the program any further, this would be a good place to pause for a moment and reflect on the program theory that you have documented. Ask

**QUICK CHECK**

1. A group of assumptions that, taken together, explain why a program should work is called the program's
 - a. Context
 - b. Implementation
 - c. Strategy
 - d. Theory
2. For the program in the previous Quick Check aimed at reducing risky behavior and decreasing the high school drop-out rate, describe at least two contextual conditions.
3. Explain how a theory of change differs from a theory of action.

Answers: 1-d; 2-answers will vary (example: a facility to house the youth community center and the availability of mentors); 3-answers will vary (example: a ToC describes why change occurs, while a ToA describes how change occurs)

yourself again why you think your assumptions of the program should work. Are your assumptions based on a solid research foundation? That is, do you have reason to believe based on results from evaluations conducted by others or more general research in the field that the program will work? Or are your assumptions based on emerging knowledge in the field, a hypothesis, or your own experience?

Understanding the basis of the program's theory is important to designing a rigorous evaluation. Implementation assessment should always be central to your evaluation design; however, the less evidence there is to support the program's theory, the more carefully you will want to monitor the implementation of the program and gather early and intermediate information on program effectiveness. If there is evidence from methodologically sound past evaluations that is contrary to your proposed theory, you will want to think carefully about what is different about the program to inspire those who are developing the program to think it will work. In such cases, documenting alternative theories may prove useful to you in understanding and interpreting program results. It is important to note that there is nothing wrong with a sound, well-documented theory that has little existing information to support its effectiveness, as the information you obtain from your evaluation may be the foundation of innovation.

5.8 CHAPTER SUMMARY

Embedded evaluation is a comprehensive approach to build evaluation into your program's design and operations. The first step in conducting an evaluation is to understand what you want to evaluate, beginning with the program's goals and strategies. A **program goal** is a

broad, general statement of what a program intends to accomplish or its desired result. Program goals should be worded as **outcome statements**. **Program strategies** are activities the program puts into place to accomplish its goals. Strategies might include services, materials, training, resources, or a cluster of activities. The next step is to relate program strategies to program goals. **Program theory** is the theory as to why the program should work. It is a set of underlying assumptions that explain the linkages between program strategies and program goals. Documenting the program using program theory will aid program staff and evaluators in describing the program's goals, delineating the program's strategies, and explicitly stating the logic that relates the program's strategies to its goals. It is also important to identify the **contextual conditions** necessary for the program to operate. A contextual condition is any resource, infrastructure, facility, service, or other condition that is necessary for the program to be successful, but that is not part of the program itself. **Contextual influences** are factors in the environment that may affect the program's operations and success; context can be examined using a PEST analysis examining political, economic, social, and technological influences.

A **theory** is a system of beliefs intended to explain how something works. A **theory of change (ToC)** describes how change occurs. A ToC can be narrative or pictorial. However, it is typically a general representation of how strategies relate to goals. Program theory is a ToC. A **theory of action (ToA)** is the operationalization of a theory of change that describes how a program is delivered. **Implementation theory** is a ToA that describes the implementation of program activities.

Reflection and Application

1. Choose a program or policy in your community and identify its stated program goals. Are these goals worded as measurable outcomes? If not, read through the documentation of the program and rewrite the program goals as measurable outcomes.
 - a. Next, identify the program's strategies.
 - b. Brainstorm the theory that relates the program's strategies to the program's goals (worded as measurable outcomes).
 - c. Using the brainstormed theory, word the early and intermediate objectives as measurable outcomes.
 - d. What contextual conditions are necessary for the program to be successfully implemented?
2. Choose a social problem important to you. Develop goals indicating the necessary change to address this problem. What strategies might you use for a program focused on these goals?