# I

# Fundamentals of Needs Assessment

# ONE Overview of Needs Assessment

## PURPOSE

This chapter will enable you to accomplish the following:

- Describe what a needs assessment is.
- Identify the purposes and characteristics of a needs assessment.
- Define key terms.
- Learn how the definitions of needs assessment, sources of data, and data-collection and analysis strategies can be combined to create a needs assessment.
- Describe five approaches to needs assessment.

## OVERVIEW

Most experts agree that human learning, training, and performance-improvement initiatives should begin with a needs assessment. This chapter sorts through the confusing collection of ideas about what a needs assessment really is and what the best ways to conduct one are.

As you read the following examples of typical requests that should lead to needs assessments, think about their similarities and differences:

- *"The vice president is ready to start his personal development program. How should he proceed?"*
- *"Team production is down! The engineers say the technician team is struggling with the new process. The team disagrees. Can you give them all training or something?"*
- *"We need to update the curriculum in our graduate program. What should the new curriculum include?"*
- *"Two major employers are moving out of our community. What actions should we take to keep employers here and to entice other employers to move to this community?*
- *"What issues are of greatest concern to the communities in this region?"*
- *"Which workforce development initiatives should we invest in to make our country more competitive in the global marketplace?"*
- *"Next year our plant will continue the projects in Six Sigma quality and culture change. We also will implement new manufacturing procedures, install new equipment, and introduce new product lines. If employees try to make all these changes at once, productivity will fall. Where do you recommend we start? How can these efforts be integrated?"*

These requests probably sound familiar to most human resource development (HRD), human performance technology (HPT), instructional design (ID), community development, and international development professionals. Let's consider the similarities in the requests first and then their differences. Along the way, we will discuss the characteristics of needs assessment and define some key terms.

## SIMILARITIES AMONG NEEDS ASSESSMENT REQUESTS

First, did you identify *dissatisfaction with the current situation* and *desire for change* as similarities among the requests? Each request implies that

a gap or discrepancy exists between what is and what could or should be. A learning or performance gap between the current condition and the desired condition is called a need (see Figure 1.1).

Needs assessment is a process for figuring out how to close a learning or performance gap. It involves determining what the important needs are and how to address them. The process includes comparing the current condition to the desired condition, defining the problem or problems, understanding the behaviors and mechanisms that contribute to the current condition, determining if and how specific behaviors and mechanisms can be changed to produce the desired condition, developing solution strategies, and building support for action.

Second, did you notice the similar aims for the requests? They all focus on *addressing current issues* or on *specifying future learning or performance needs*. Needs assessment requests are typically aimed at the following situations:

- Solving a current problem
- Avoiding a past or current problem
- Creating or taking advantage of a future opportunity
- Providing learning, development, or growth

Third, did you notice that the requests *imply a solution that requires training, learning, performance improvement, community development, international development, or a combination of these*? Needs assessment is a diagnostic process that relies on data collection and analysis,
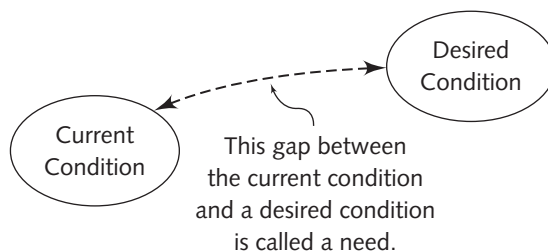


**FIGURE 1.1** *Definition of a Need*

collaboration, and negotiation to identify and understand gaps in learning and performance and to determine future actions. Examples of actions that could be implemented as the result of a needs assessment include offering improved incentives, providing better information, engaging the appropriate people, enhancing the work design, supplying essential tools or technology, and implementing training or learning programs.

Fourth, did you also recognize that the requests are alike in including *little evidence* and *few clues* about whether taking the requested action will likely improve learning, development, or performance? Important details about the situation and the expected course of action are unknown to both those who request a needs assessment and those who receive such requests.

Similar to the sample requests at the beginning of this section, most requests that lead to needs assessments include fuzzy goals, incompatible beliefs, flawed assumptions, and large leaps in logic. In addition, they contain *little diagnostic information* about the specific behaviors or mechanisms that produced the current condition, about what particular changes could create the desired condition, or about what support may be required from other people or groups. Assessing needs in such situations before jumping in with solutions greatly increases the likelihood of success and avoids costly mistakes.

> **Tip**
> Throwing resources at problems or opportunities is like throwing a chocolate pie at the wall and hoping some of it will stick: the action is more likely to create a mess than an improvement; furthermore, it is a waste of good resources.

Finally, did you notice that all the sample requests include *challenging questions*? The right answers to these questions cannot be found in a book or on the Internet. Indeed, such questions do not have one right answer. Using quick, commonsense solutions or throwing resources at such situations seldom work well either.

Instead, the requests for learning, training, development, and performance improvement initiatives must be evaluated and the "merit, worth, or value" (Scriven, 1991, p. 139) of the various options must be analyzed. Thus, needs assessment is a type of evaluation.

The Systems Model of Evaluation (Preskill & Russ-Eft, 2003; Russ-Eft & Preskill, 2005, 2009) identifies various factors for one organization that affect the success and the outcomes of an evaluation, including a needs assessment (see Figure 1.2). Factors in the needs assessment or
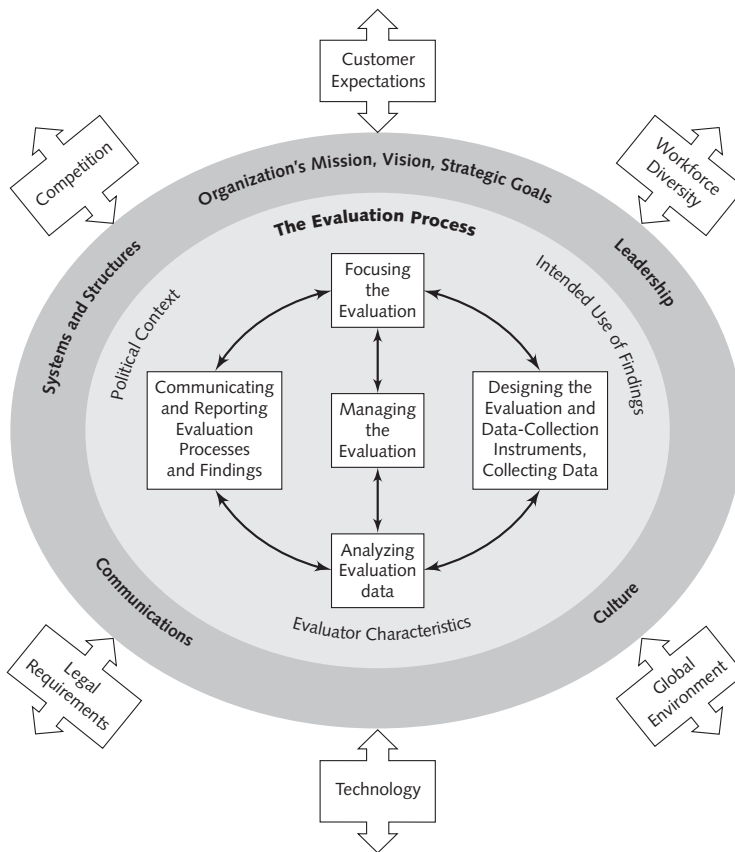


**FIGURE 1.2** *A Systems Model of Evaluation*

Reprinted with permission from Sage, appearing in Russ-Eft, D., and Preskill, H. (2005). In search of the Holy Grail: ROI evaluation in HRD. *Advances in Developing Human Resources, 7,* 71–85.

evaluation project itself (such as the approach to managing the project) are shown in the model's inner circle; factors within the organization (such as the organization's mission, vision, and strategic goals) are shown in the model's outer circle; and factors that are outside the organization (such as customer expectations) are shown in the shapes that encircle the ring of organizational factors. Thus, many factors can influence how the challenging questions raised by a needs assessment are answered.

We have considered the similarities among the requests that lead to needs assessments. Next, we consider their differences.

## DIFFERENCES AMONG REQUESTS THAT LEAD TO NEEDS ASSESSMENT

First, did you notice that the requests represent *different definitions of need*? Stufflebeam (1985) identified four useful definitions of need: discrepancy, democratic, diagnostic, and analytic. To explore these definitions, let's examine how needs could be determined for one example presented at the beginning of this chapter: "We need to update the curriculum in our undergraduate program. What should the new curriculum include?"

*Discrepancy needs* are based on the differences between the current and the ideal or the expected performance. Using a discrepancy definition of the needs, faculty members could compare their undergraduate curriculum with an ideal undergraduate curriculum, such as the one offered by a top-rated university program or endorsed by a professional association. The faculty members could also compare the number of outstanding alumni from their program and an ideal program using pre-determined criteria.

*Democratic needs* are based on what most people prefer or select and are determined by majority rule. Using a democratic definition of needs, faculty members could examine student choices. Because students vote with their feet, course enrollment in elective courses could

serve as a measure of students' preference. Data on student preferences for elective courses could also be collected by surveying or interviewing students about their favorite electives.

If the faculty members believed that students enrolled in courses based on the instructor rather than the course title, they could use a democratic assessment to measure the enrollments for each faculty member over a period of time. Similarly, if faculty members assume that students prefer to avoid early morning courses, they could review several years of course schedules and the records showing the enrollments in electives.

*Analytic needs* are determined by intuition, insight, expert consideration, or enlightenment. Using an analytic definition of need, faculty members could identify the curricular changes that would improve the department's performance based on the insights of internal or external consultants or a program review committee.

*Diagnostic needs* are defined through causal analysis and research. Using diagnostic needs, faculty members could research the program's contributions to the job skills of recent graduates. Such analysis could provide insight into how each course contributes to the graduates' success in securing and keeping a job.

As the example above highlights, needs assessments are greatly influenced by the definition of need (i.e., discrepancy, democratic, analytic, or diagnostic), the sources of data, and the approach by which the data are collected. Needs assessments are also influenced by how the data are analyzed. In the curriculum example, some data could be analyzed using numerical rating scales, and other data could be analyzed using themes. Concept mapping could be used to visually show the relationships among the collected data (Watkins, Meiers, & Visser, 2012), or scenarios could be created. In addition, stories could be told.

Our curriculum example does not list all the data sources, data collection, or analysis options available to the faculty members—or, indeed, to anyone who conducts a needs assessment. However, it is sufficient to illustrate that the definition of need, the sources of data,

and the choices about data collection and analysis influence the needs assessment process and outcomes. The analyst, sometimes with the help of a needs assessment committee, plans which definition of need is used, how needs assessment data will be collected and analyzed, and which data sources will be used. Most needs assessments rely on multiple sources of data, multiple kinds of data and more than one kind of data analysis.

Of course, the data sources and the data collection and analysis methods should reflect serious consideration of the political situation and the kinds of information that will have credibility for the decision maker(s). For instance, in our extended curriculum example above, some choices might be more appropriate if faculty members feel political pressure to justify the curricular changes to the college president and board. However, other less costly choices might be appropriate for a cohesive faculty group seeking to understand the situation before using their own authority to make changes.

Second, did you notice that the sample requests target *different levels of learning, development, and performance*? Needs assessment can be used to diagnose the learning and performance needs of individuals, teams, functional units, and whole organizations. They can also be used to diagnose the people-related issues of interorganizational groups, communities, countries, and even international efforts.

Third, did you notice that the requests focus on *various aspects of learning and performance*? Learning is the act of gaining knowledge or skills. It can exist in the individual, and it can reside in an organization's systems, databases, technologies, and culture. Training supports individual learning (that is, a gain in knowledge and skills) through specialized instruction and practice. The terms *knowledge* and *skill* have different meanings:

- *Knowledge:* The body of facts about a subject matter and the understanding that a person acquires through study or experience
- *Skill:* Knowledge that one proficiently applies in appropriate situations

The goalie in Figure 1.3 may have in-depth knowledge of soccer rules and the various plays allowed in the game. His role on the team is to prevent the ball from going into the net and allowing the opposing team to score. The picture shows that he has failed to block several balls.

Performance includes accomplishments, the processes that result in accomplishments, and the capacity for future performance. Let us consider each of these aspects of performance for our soccer goalie:

- *Accomplishment:* The major accomplishment desired for the goalie during the game is to save the goal by preventing the ball from going into the net.

- *Process:* To save the goal, the goalie integrates his knowledge of how to play the position with such skills as deflecting the ball and falling on it. His knowledge and skills interact with other factors (such as the defensive skills of his teammates) to affect how well he carries out the process of playing goalie.

- *Capacity:* The goalie's capacity for performance includes his bundle of skills and resources that can be applied to future play. They indicate his abilities to apply his mental, physical, and social skills to add value to the team.



**FIGURE 1.3** *Soccer Player Who Knows Game's Rules but Lacks Game's Skills*

The goalie's accomplishments, processes, and capacity could affect the team's accomplishments (for example, the number of games won), their processes (such as the strategies the team uses while playing the game), and their capacity (that is, the team's bundle of skills and resources that can be applied to future play).

Some people see learning and performance as separate activities. We see them as interconnected. As seen in the example of the goalie, learning in the form of knowledge and skills can affect performance and vice versa. Although learning is not directly observable, many behaviors that create performance can be observed. Thus, changes in behavior often are used to infer that learning has occurred. For example, if our goalie observed a new technique, practiced the technique, and in subsequent games effectively used that technique, we could infer that learning had occurred.

This section has described the similarities and differences among sample requests that lead to needs assessments and in the process described the characteristics of needs assessments and defined some key terms. Next we focus on the benefits of needs assessment.

## BENEFITS OF A NEEDS ASSESSMENT

A needs assessment frames the problems or opportunities of interest and builds relationships among the people and groups who have a stake in the issue. It also can provide the foundation for planning and action to improve learning, training, development, and performance. More specifically, a needs assessment can align resources with strategy, build relationships among those who have a stake in the situation, clarify problems or opportunities, set goals for future action, and provide data, insights, or justification for decision making. A needs assessment can also identify leverage points and resources for making changes, establish objectives for initiatives, prioritize actions, determine who must be involved for the HRD, HPT, or development efforts to be successful, and provide baseline data for later evaluation of results.

Equally important, a needs assessment can build support for HRD, HPT, community development, and international development efforts. The processes of using accurate data and negotiating among differing points of view can engage and mobilize decision-makers and others who have a stake in the situation. By sharing their knowledge, insights, and resources, those who are closest to the situation contribute to creating solutions that are practical, credible, and appropriate for the situation.

Given all of these benefits, it is obvious why so many training, learning, community and international development, and performance improvement models advocate systematic needs assessment: it ensures that interventions are relevant and address the needs.

## FIVE APPROACHES TO NEEDS ASSESSMENT

Needs assessments are particularly important to professionals in such fields as HRD, HPT, and community and international development, who must align their work with strategic, individual, organizational, or community needs. In today's competitive climate, improving learning, training, and performance is emphasized more than ever before.

At the same time, individuals, organizations, and communities guard their resources. Today's decision-makers want HRD, HPT and community development initiatives to focus on their critical priorities and to drop the non-value-added work. Needs assessments can provide such a focus, but politics will affect how needs assessments are actually conducted.

Consider the situation facing Ruth Duple, the new manager of learning and organization development for an international firm that manufactures computer equipment. The firm's management team recently speculated that poor supervisory performance was causing quality problems, increased turnover, and missed production deadlines. They handed the problem to Ruth. When she reviewed this new challenge, Ruth realized that she did not know how the poor supervisory performance related to the organization's strategic goals, the cause or

causes of the problems, or the management team's vision for supervisory performance.

**Tip**

> Some people focus on the problems in a situation, while others recognize that the same problems present opportunities for improvement.

To aid her thinking, Ruth sketched a simplified systems diagram of her firm (see Figure 1.4). The large circle represents the firm. Note that it is bordered with dashed lines to acknowledge that changes from outside the firm (such as government regulations, politics, competition, and availability of raw materials) can affect the firm, and that changes from inside the firm (such as increased wages) can affect the larger environment. Inputs to the firm's performance system include the employees, tools, and raw materials (such as sound and video cards).

Within the firm, each gray box represents a distinct unit or department that contributes to the production process. Of course, the firm actually has many more units than are shown in Figure 1.4. Employees in each unit use work processes (shown by the darker gray horizontal boxes) to convert materials and other inputs into unit outputs. The outputs of one unit become the inputs for other units. When all the production processes are complete, the firm's output—computer equipment—is loaded on trucks for shipment to customers.

The employees in each unit report to a supervisor who in turn reports to a manager. The managers and some other executives report to the firm's CEO.

For the sake of simplicity, Ruth did not include in her sketch the collaborative efforts that span units; the feedback that supervisors receive from internal and external customers and from managers; the firm's structure, politics, and culture; or the external community. However, her sketch does provide a focus for thinking about the needs assessment.
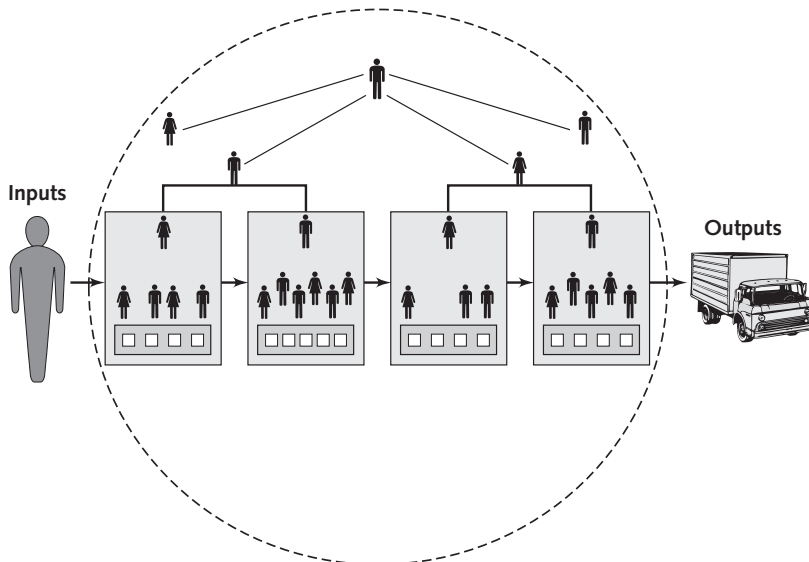
**FIGURE 1.4**  *Ruth's Sketch of a Simplified Systems Diagram*

As an experienced HRD professional, Ruth knows many needs assessment models, each with its own jargon and unique steps. She also has reflected on how the four definitions of need could fit her situation, the many ways to collect and analyze data, and the sources of data for her situation.

Ruth also is familiar with the needs assessment study by Mathews, Ueno, Kekale, Repka, Pereira, and Silva (2001). It focused on organizations in the United Kingdom, Finland, and Portugal that were implementing quality management practices, such as ISO 9001:2000. The study ranked the importance of the following elements to assessing training needs within an organization:

- Senior management decisions
- Supervisors' opinions
- Skills inventory
- Employee surveys

- Analysis of projected business or service plans
- Customer opinions
- Training audits
- Requests from work groups
- External consultant
- Advisory committee

The study found that senior management decisions and supervisors' opinions received much higher rankings than the other elements, indicating the importance of the senior management and supervisors in determining training needs. The authors recommended that objective and formal methods of assessing needs be more widely adopted. This study highlights that, while management and supervisor perspectives are important, using objective data and formal methods could ensure broader support for addressing quality management practices.

Ruth's firm must address its quality problems, increased turnover, and missed production deadlines to remain competitive in today's marketplace. Given the importance of these issues, Ruth decided to use a formal needs assessment approach to gain more knowledge about the gap between actual and desired supervisory performance and to figure out how to close it. She considered five needs assessment approaches.

The first approach, *knowledge and skills assessment*, focuses on the knowledge and skill needs that may exist. If such needs do exist, they can be addressed with training. Ruth could survey the supervisors themselves to obtain a list of their knowledge and skill needs or she could talk to managers. Then Ruth could implement training programs that address the needs. This approach to needs assessment is described in Chapter Four.

The second approach, *job and task analysis,* focuses on information about the scope, responsibilities, and tasks of particular job functions. Because Ruth knows that supervisors regularly mishandle performance reviews, she could implement a job and task analysis to gather specific

information about how this supervisory job task should be conducted in the firm. Ruth could use this needs assessment approach to prioritize the knowledge, skills, and other improvements that are required to close the gap between the way the performance reviews are conducted and the way they should be conducted. This approach to needs assessment is described in Chapter Five.

The third approach, *competency-based needs assessment*, focuses on determining the competencies needed for specific job functions. Competencies are the knowledge, skills, attitudes, values, motivations, and beliefs that people must have to be successful in a job. Ruth knows that successful supervisors are those whose teams continually outperform other teams and who have higher employee retention rates. Ruth could use this needs assessment approach to identify specific behaviors that are exhibited by successful supervisors and not exhibited by less successful supervisors. This approach to needs assessment is described in Chapter Six.

The fourth approach, *strategic needs assessment*, focuses on learning and performance gaps within the context of an organization's business strategy. Ruth could use this needs assessment approach to learn how supervisors do and do not contribute to the unit's and the firm's strategic goals and about the work mechanisms that contribute to their current performance. She could also consider factors in the firm's external and internal environments. Ruth could use the information she gathers to map the desired work processes and outcomes, to develop supervisory training, and to address non-training issues. This approach to needs assessment is described in Chapter Seven.

The fifth approach, a *complex needs assessment,* is used when applying a single approach alone, such as a knowledge and skills assessment, a job and task assessment, competency needs assessment, or a strategic needs assessment, is insufficient for assessing the needs. For example, complex needs assessments are appropriate for assessing needs at the operational level of an organization that is facing many non-training and systemic issues. Conducting a complex needs assessment can require the analyst to combine components from the other approaches to needs

assessment, apply expertise from other subject areas (such as knowledge of safety regulations or organization development)—and, most importantly, to innovate.

Figure 1.5 is a graph of the relative time and effort required to complete each approach to needs assessment. The approaches in the lower portion of the chart are less time- and effort-intensive. Figure 1.6 summarizes the approaches presented in Figure 1.5, starting with the lower-most approach, describing when to use each approach and its advantages and disadvantages.

Regardless of which approach you decide to use, consider the realities of conducting needs assessments in the workplace or community. First, time will always be a critical factor, as most clients or sponsors will be more concerned about implementing the actual improvement than about spending time analyzing needs. Second, line managers may be reluctant to release personnel to participate in interviews or focus groups, especially if operations will be affected. Third, needs assessments are political. Individuals hold differing and sometimes conflicting opinions, and they use power and influence to achieve their own ends. Therefore, a needs assessment usually involves negotiating cooperation among people to achieve a common task. For this reason, a needs assessment committee can provide important support for a needs assessment. Often individual advisory committee members serve as liaisons with groups who have important stakes in the outcomes of the needs assessment.
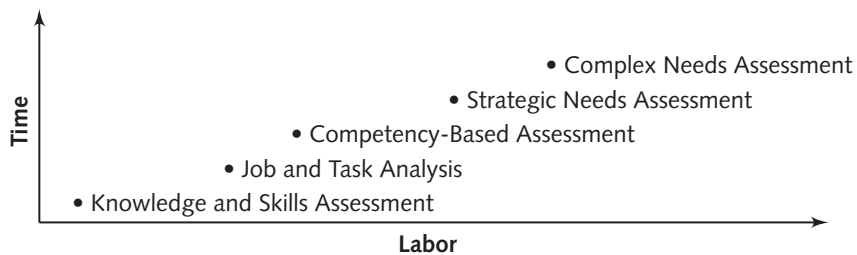


**FIGURE 1.5** *Comparison of Time and Effort Required for the Needs Assessment Approaches*

| Approach | Purpose | When to Use | Advantages | Disadvantages |
|---|---|---|---|---|
| Knowledge and Skills Assessment | Identify the knowledge and skills required to perform a job | Implement new technology<br><br>Identify training needs<br><br>Develop a training plan | Ensures training is linked to the learner's needs<br><br>Easiest to implement | Has a limited focus |
| Job and Task Analysis | Determine responsibilities and tasks necessary to perform a job | Develop new job descriptions or revise existing position profiles<br><br>Identify task listings for new or redesigned job functions: knowledge, skills, abilities, and standards<br><br>Develop consistent training requirements, especially for technical and specialized jobs | Stimulates interest<br><br>Defines skill requirements for entry-level versus mid-level positions<br><br>Identifies additional knowledge, skills, and abilities to move across or upward within a job function | Does not take into account the external factors that may affect job performance<br><br>Is time-consuming<br><br>Is costly in time and personnel resources<br><br>Assumes that the work is static<br><br>Assumes that there is one best way to perform the work |
| Competency-Based Needs Assessment | Identify knowledge, skills, and attitudes for superior job performance | Identify competencies that are required for jobs<br><br>Measure proficiency levels of people<br><br>Develop standardized training<br><br>Develop performance management systems (recruiting, hiring, promoting, or career planning) | Determines qualities that distinguish average from superior performance<br><br>Provides information about current and future predictors or job performance | Is time-consuming<br><br>Requires high involvement of many people within an organization<br><br>Is costly<br><br>Requires good project management system for large projects |

**FIGURE 1.6** *Matrix of Needs Assessment Approaches*

| Approach | Purpose | When to Use | Advantages | Disadvantages |
|---|---|---|---|---|
| Strategic Needs Assessment | Examine existing performance problems (reactive) or address new and future performance needs (proactive) within the context of the organization's or the community's business strategy<br><br>Develop long-term performance improvement plan | Link performance improvement needs to business strategy of the organization or community<br><br>Identify performance improvement opportunities at various levels (such as individual, process, and organizational) | Develops long-term solutions to existing performance problems or new performance needs<br><br>Solves problems that affect core business processes<br><br>Eliminates non-value-added activities | Is time-consuming<br><br>Is costly in time and personnel resources<br><br>Requires that a business strategy exist |
| Complex Needs Assessment | Assess situations that include non-training or systemic needs as well as training needs; assess needs that are complex, require innovation or one or more bodies of expertise beyond needs assessment (e.g., safety, organization development) level | Because this approach is more complex than the other four approaches, use it when the other approaches are insufficient or when components of the other approaches must be combined | Provides flexibility | Is time-consuming<br><br>Requires the analyst to innovate<br><br>Is costly<br><br>May require the creation of needs assessment processes and forms |

**FIGURE 1.6** *Matrix of Needs Assessment Approaches* (continued)

After considering all her options for this needs assessment including the five approaches described above, Ruth concluded that this could be a high-stakes needs assessment both for the firm and for her career. Because of the project's importance, Ruth decided to review the needs assessment ideas and models presented in the next chapter before selecting a needs assessment approach.

## CONCLUSION

Needs assessment requires carefully analyzing a situation and building support for action. It involves considering all the various kinds of data that could inform the decisions and actions, the potential sources for the data, and choices among data analysis method to determine what will best provide a foundation for the learning, training, development, or performance improvement initiative.

Regardless of which needs assessment approach you choose to implement, the message is simple: needs assessments set the direction for learning, training, development, and performance improvement initiatives. The next chapter describes some practical ideas and models that can contribute greatly to a successful needs assessment.