

# 6

## NEEDS ASSESSMENT AND EVALUATION IN EARLY INTERVENTION PERSONNEL PREPARATION

### Opportunities and Challenges

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#### Janet's Story Continues

It has been 6 months since Janet attended the annual state convention for speech-language pathologists. She still would like to learn more about routines-based intervention and integrated therapy. She indicated these needs on a survey she received from the early intervention lead agency in her state. About 3 months after Janet returned her needs assessment survey, she received a brochure announcing a 3-day intensive workshop on integrated therapy. Janet read the brochure and was really excited. This was the workshop she had been waiting for! Participants would learn how to embed related service goals into routine activities. They also would learn how to work as team members to plan integrated therapy programs for young children with disabilities. She hoped learning about these techniques would make her feel better about her role in the early intervention program.

The following week, Janet went to the workshop, which was held in the ballroom of a hotel about an hour from her home. Janet arrived at the site and was amazed to see that 75 people from all over the state were in attendance. She recognized a few people, including some of the preschool and Head Start teachers with whom she had worked in the past year. Over the 3 days, she got to know some other teachers in her county and some speech-language pathologists from other counties whose jobs were similar to her job.

Janet was surprised at the various reactions that different people had to the workshop over the course of the 3 days. The reasons people had come were so varied. Many of the teachers were there because they needed a specialized certificate to keep their jobs, and credit toward the certificate could be obtained by participating in the workshop. Janet was surprised that some of the participants did not seem to know (or care) about the topic. Their main interest seemed to be how to fit shopping expeditions into the schedule. Over the 3 days she noticed that attendance at the sessions seemed to lag, especially after the lunch break, which seemed to serve as a time for excursions to the nearby mall.

Other people she talked with were there because of pressure from their supervisors to attend. Some of these participants seemed to have the attitude that routines-based intervention and integrated therapy were fads like many of the others that had "come down the pike." It would fade away like other fads, once people got over the initial excitement and realized the impracticality and unrealistic nature of the ideas. She talked with a few people who felt misled by the

topic. They had filled out the same needs assessment that Janet had completed. However, they had interpreted integrated therapy to mean behavioral approaches to children with challenging behaviors. These people decided to leave after 1 day, when the agenda clearly was not meeting their needs.

Janet thought the presenters were excellent. During the breaks, she overheard many positive comments from others about the ways the presenters explained integrated therapy and routines-based intervention. They used videotapes and case studies to illustrate how these techniques could be used in early intervention programs. Janet learned that the presenters were nationally known early childhood special educators. She was surprised when some of her speech-language pathology colleagues were disgruntled by what they perceived to be a bias against therapists in the presentations. She agreed with them that it would have been nice to have a therapist as part of the instructor team.

Overall, however, Janet was satisfied with the workshop. She expressed this on the evaluation form she filled out at the end of the third day. As she read each question on the evaluation form, she realized what satisfied her about the workshop, at least in terms of the presenters and the facility: The presenters were well-prepared and knowledgeable (one had a great sense of humor), the room in which the event took place was comfortable, and it was nice to have refreshments served at the breaks.

Janet was pleased with her performance on the knowledge test, administered to all participants on the final day of the workshop. She answered 45 of 50 questions correctly. She bought a book one of the presenters wrote on routines-based intervention and left the workshop thinking that she now understood what was meant by routines-based intervention and integrated therapy.

She still had concerns, however, about how she would apply what she had learned to her work. Janet believed she was somewhat prepared to incorporate new ideas into her individual practices but was concerned about how she could influence her team members. After all, the workshop time scheduled for team planning had not been very helpful for addressing team concerns because her team members were not there. Perhaps she should have mentioned her concerns to the presenters. She decided that it probably was best that she didn't say anything. She wouldn't want the presenters to think she was a complainer.

As she was driving home after the final day of the workshop, Janet wondered how she would apply all she had learned on Monday morning. "Maybe if I were smarter, I could figure this out," thought Janet.

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Janet's story is not that unusual. Many early interventionists have had similar workshop experiences. Janet completed a needs assessment and subsequently participated in an instructional event purportedly designed to meet her expressed needs. The instructors used a variety of active and passive strategies to engage Janet as a learner, and their presentation styles pleased her. Two types of evaluation data, satisfaction and knowledge, were gathered from Janet. She generally was satisfied with the instruction. Her performance on the exam indicated that the instruction had a measurable impact on her knowledge about integrated therapy and routines-based intervention.

Yet how meaningful will the instruction be for Janet on the job? Will she be able to apply what she learned to the work she performs every day with children and families? How will Janet incorporate what she learned into her ongoing interactions with team members?

Janet's story represents an example of a personnel preparation effort in which needs assessment and evaluation data were gathered; however, the extent to which these activities were useful and meaningful could be questioned. The instructors used videotapes and case studies to illustrate how early interventionists apply routines-based intervention and integrated therapy in early intervention. They did not, however, evaluate Janet's application skills during or after the workshop. There were no activities related to follow-up after the

workshop. The organizers of this event relied on a “train and hope” approach. They instructed Janet and hoped she would be able to apply the knowledge, skills, and attitudes she gained during instruction to her real-world situation.

In this chapter and in Chapter 7, needs assessment, evaluation, and follow-up are described, and the importance of these activities to successful personnel preparation efforts in early intervention is highlighted. Personnel preparation is defined as any activity on the part of an individual that is intended to advance the individual’s professional stature or performance on the job (Elam, Cramer, & Brodinsky, 1986). To be consistent with the ecosystemic framework outlined in Chapter 1, we believe early intervention staff developers should rethink how they assess needs, evaluate processes and outcomes, and implement follow-up.

This chapter shares ideas and strategies about needs assessment and evaluation activities. It offers rationales for the importance of needs assessment and evaluation as crucial, interrelated features of personnel preparation efforts. An array of strategies is described that can be used to conduct needs assessment and evaluation activities, while acknowledging complexities and challenges surrounding implementation. Our goal is to provide early intervention staff developers with practical guidance for selecting needs assessment and evaluation strategies appropriate for their circumstances. We do not believe in a “one-size-fits-all approach” to needs assessment and evaluation; therefore, we provide guidance not prescription.

This chapter begins with a discussion of the rationale for focusing on needs assessment and evaluation in personnel preparation. This discussion is followed by the presentation of a framework that might be used by staff developers to guide them in making decisions about needs assessment and evaluation approaches.

## **RATIONALE FOR A FOCUS ON NEEDS ASSESSMENT AND EVALUATION IN PERSONNEL PREPARATION**

Many models exist that offer guidance on planning successful personnel preparation programs for adult learners (e.g., Bertcher, 1988; Bille, 1982; Caffarella, 1994; Cervero, 1988; Harris, 1989; Houle, 1972; Knowles, 1980; Laird, 1985; Phillips, 1991; Tracey, 1992; Trohanis, 1994). All of these personnel preparation models contain explicit or implicit assumptions related to how adults learn; the importance of involving learners in the identification of personnel preparation needs; how transfer of attitudes, knowledge, or skills to practice contexts is best accomplished; and the necessity of evaluating the effects of personnel preparation efforts. The terms *needs assessment*, *evaluation*, and *follow-up* frequently are used to organize these assumptions, and reciprocal linkages among these terms are acknowledged or implied in the majority of these models. Staff developers probably would refer to these concepts, and the processes associated with them, as “givens.”

In reality, however, Janet’s experiences illustrate that these givens often receive “lip service” but not serious consideration, time, or resources. Needs usually are defined globally, evaluations often are limited to satisfaction and knowledge acquisition measures, and follow-up activities rarely occur. These superficial approaches result in instruction that is characterized as being generally unresponsive to individual needs and largely ineffective, particularly for achieving changes in practice contexts (e.g., Winton, 1990; Wood & Thompson, 1980).

The pressing need created by early intervention legislation to instruct large numbers of participants from different disciplines and geographical areas has resulted in a “crisis mentality” in early intervention personnel preparation (Winton, 1990). Large numbers of people are being instructed without adequate attention given to needs assessment, evalu-

ation, and follow-up activities, which are costly and time consuming to implement. When resources are limited, demands for accountability in these three important areas may be reduced. In Janet's story, for example, the staff developers could produce outcome data related only to participant satisfaction and knowledge acquisition. There was no accountability for evaluating learning transfer, even though Janet spent 3 days in an intensive workshop to learn skills she wanted to apply in her daily interactions with children, families, and other team members.

Given the cost, time, and complexities involved, why should staff developers give priority to needs assessment and evaluation activities? A number of important rationales have been offered in the personnel preparation literature. Needs assessments are important because they can give the learner a sense of ownership in the personnel preparation process (Knowles, 1980). Adults are more likely to commit to learning something when the goals and objectives of instruction are considered realistic and important to them (Bruder & Nikitas, 1992; Wood & Thompson, 1980). Needs assessments can help clarify and verify needs from a variety of perspectives (e.g., the learner, the administrator, the instructor). Learners are less likely to leave an instructional session because they misunderstood the term *integrated therapy* when needs are clarified and verified (Gallegos, 1979). Clarification and verification of needs across teams composed of multiple stakeholders is a key for obtaining consensus about focus and direction for agency- or communitywide personnel preparation initiatives (Buckley & Mank, 1994). Needs assessment information can provide baseline data useful for subsequent program evaluation efforts. Finally, needs assessment data can be used to provide a shared focus and agreed-upon agenda for participants and instructors.

Evaluation data are important for determining the extent to which personnel preparation outcomes are met, supporting modifications in the personnel preparation program, and providing direction for future personnel preparation efforts (Grotelueschen, 1986). Program evaluation data can be used by policy makers, funders, program planners, participants, administrators, and other interested people for planning, decision making, and allocating resources. Although judging the value, worth, or effect of a program is difficult, there are several interrelated reasons why systematic evaluation efforts are crucial to personnel preparation. According to Caffarella (1994),

The process (1) helps keep staff focused on the goals and objectives of the program, (2) provides information for decision-making on all aspects of the program, (3) identifies improvements in the design and delivery of learning events, (4) increases application of the learning by participants, (5) allows for program accountability, (6) provides data on the major accomplishments of the program, and (7) identifies ways of improving future programs. (p. 120)

## FRAMEWORK FOR MAKING NEEDS ASSESSMENT AND EVALUATION DECISIONS

The ecosystemic orientation given in Chapter 1 provides a framework for guiding decisions about needs assessment and evaluation activities. Interrelated factors, derived from the framework, that affect needs assessment and evaluation decisions include instructional context, target audience, and target outcomes. Each of these factors is discussed briefly in this section, followed by vignettes that show real-world examples of these factors and their interactions. These factors are explored in greater depth later in this chapter as strategies and challenges associated with needs assessment and evaluation are described.

### Instructional Context

Needs assessment and evaluation strategies described in this chapter and follow-up activities described in Chapter 7 should be adopted for use only after careful consideration is

given to the specific environments in which personnel preparation activities will occur. This premise requires that a variety of contextual variables (e.g., “political” climate; policies; resources; instructors; participants; those affected by the instruction, such as children, families, other team members, and administrators) be considered in planning and implementing needs assessment and evaluation activities.

### **Target Audience**

The nested arrangement of structures described in the ecosystemic framework illustrates that needs assessment and evaluation efforts can be targeted at one or more levels (e.g., individuals, agencies, communities, states, nation). Needs of the individual, agency, or community can be assessed, and evaluation can be targeted at these levels. Reciprocal or transactional relationships that exist across levels mean that strategies implemented at one level are likely to affect other levels. A needs assessment targeted at a statewide level, for example, can exert positive or negative influence at the individual level. Personnel preparation decisions based on a statewide needs assessment may meet needs of some individuals, but it is unlikely that the needs of all individuals will be addressed.

### **Target Outcomes**

The identified problem and target outcomes to be addressed by personnel preparation influence the types of needs assessment, evaluation, and follow-up activities that are conducted. Activities should be congruent with the purpose and scope of the personnel preparation effort. For example, knowledge-oriented needs assessment and evaluation strategies should be used when the desired outcome is knowledge acquisition. The following vignettes illustrate how context, target audience, and target outcomes influence the needs assessment, evaluation, and follow-up approaches used by individuals or groups.

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**Vignette 1:** Personnel from the university affiliated program (UAP) in a southern state are asked by the early intervention lead agency to conduct a 6-hour workshop in each of eight regions. The lead agency must provide assurances to the federal government that it instructs all primary referral sources about the Part H program. The instruction, therefore, will meet an objective specified in the Comprehensive System for Personnel Development section of the 9th-year Part H application. The awareness-level instructional content includes an overview of the Part H system in the state, a description of the required components of the Part H system, and the procedures that should be followed by primary referral sources. Participants in the instruction will come from multiple disciplines and agencies. Attendance at the workshops is expected to range from 50 to more than 200 people at each site. The lead agency wants documentation related to how many people were instructed, what disciplines and agencies were represented at the workshops, and whether increases in participant knowledge about the Part H system and the responsibilities of primary referral sources occurred as a result of the instruction. These data will be submitted in the 10th-year application to the federal government.

**Vignette 2:** A faculty member from a university in the Midwest is asked to assist an early intervention program in her community as it develops and implements a comprehensive personnel preparation plan. Agency personnel engage in an extensive self-study process over a period of several months and, with the assistance of the faculty member, produce a plan for personnel preparation. The plan specifies outcomes, activities, resources, time lines, and evaluation procedures. A major personnel preparation outcome desired by program personnel is to ensure that, within the next year, all teachers are using an activity-based instruction (ABI) approach in their classrooms. The group that developed the personnel preparation plan recognized that simply providing one-shot inservice training sessions on ABI may not lead to the teachers' successfully implementing this approach

within their classrooms. Agency personnel, including administrators, teachers, therapists, and families, are committed to working collaboratively over time to reach the desired outcome. Teams composed of teachers, therapists, families, and administrators will attend five 3-hour workshop sessions conducted by the university faculty member, teachers, and families who have been using this approach. During the workshop session, participants will learn about and practice ABI. Teachers will team in pairs after the sessions to provide ongoing support and constructive feedback to one another as they implement this approach in their respective classrooms. Family members will be encouraged to participate in classrooms as the teachers implement ABI. The university faculty member and teachers experienced with ABI will be available for consultation once a month. The personnel preparation plan includes attention to obtaining process and outcome data that document achievement of the desired outcome. These data will be used to assist in the ongoing refinement and expansion of the personnel preparation plan.

**Vignette 3:** A committee composed of families and personnel from various agencies meets each month in a local community. This committee oversees implementation of the comprehensive, coordinated, multidisciplinary, interagency system of services available to all eligible Part H children and families. One major issue that continues to be raised in the committee is the lack of opportunities for children with disabilities to receive services in natural environments. Some members of the committee believe that there is a need to modify the attitudes of community providers about inclusion. Other members believe that attitudes are not the issue, that inservice instruction on implementing inclusive practices is needed. Still other members of the committee believe that funds should be made available to provide on-site consultation to teachers who are working with young children with disabilities in natural environments. A committee member suggests that a subcommittee be formed to develop a comprehensive, communitywide personnel preparation plan to address the issue. Five people volunteer to serve on this subcommittee, which will meet next week to begin its work.

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These vignettes illustrate that early intervention personnel preparation efforts can be characterized by a variety of purposes, audiences, contexts, methods, constraints, and desired outcomes. Approaches to needs assessment, evaluation, and follow-up should reflect and be responsive to different personnel preparation circumstances.

In Vignette 1, a formal needs assessment at the individual level may not be necessary or even useful if the instruction is mandated as part of state or federal guidelines (Caffarella, 1994). In this example, needs have been determined at state and federal levels. Individual personnel preparation needs do not receive priority. Outcomes, however, are targeted at the individual level. The lead agency wants each participant to be aware of the early intervention system and knowledgeable about the roles of primary referral sources. Korinek, Schmid, and McAdams (1985) characterized this type of personnel preparation effort as "information transmission." The major purpose of this type of instruction is to increase the knowledge of a specific group. Information transmission instruction will not necessarily change participant behavior in application contexts.

Vignette 2 illustrates personnel preparation aimed at changing teachers' instructional approaches. Korinek et al. (1985) labeled this type of instruction as "behavior change," which involves ongoing, in-depth attention to needs assessment, follow-up, and process and impact evaluation, at individual and organizational levels. Instruction is based on identified needs of individuals and the agency as a whole. Systematic follow-up strategies are built into the personnel preparation plan to facilitate transfer of learning. A variety of data are gathered to evaluate the personnel preparation effort and are used to assist in the ongoing refinement or expansion of the personnel preparation plan. Korinek and col-

leagues noted that this type of instruction is the most costly and time consuming and requires ongoing commitment from all concerned. These authors stated, “Not surprisingly, it is the inservice type least used, yet the only one which provides a reasonable chance of changing teacher practice” (Korinek et al., 1985, p. 36).

Vignette 3 shows the complexity that surrounds community-based personnel preparation efforts. Members of the committee have different perceptions of needs and suggest varied approaches to addressing the natural environment issue. Needs assessment, evaluation, and follow-up efforts will need to be embedded within a broad ecological context. In Chapter 3, strategies are offered for conducting needs assessment and evaluation in community-based personnel preparation efforts.

These vignettes illustrate that conducting *meaningful* needs assessment, evaluation, and follow-up in early intervention personnel preparation efforts often is easier said than done. A variety of factors related to the ecosystemic framework must be considered as these efforts are undertaken.

The next sections of this chapter consider needs assessment and evaluation in more detail and offer examples of strategies to address these two personnel preparation components. Challenges are raised, and some potential options are posed for meeting these challenges. Throughout the sections Janet’s story and the vignettes are used to illustrate key points.

## NEEDS ASSESSMENT

Needs assessment frequently describes the processes of gathering information about what people, organizations, or communities perceive as important topics to learn and of prioritizing personnel preparation activities based on this information (Caffarella, 1994). This definition implies two interrelated activities: 1) gathering of data, which assists in the identification of needs; and 2) applying judgment to assess the significance of the data gathered to determine priorities for personnel preparation (Cooper & Jones, 1984; Siegel, Attkisson, & Carson, 1978).

Needs arise when there is a “discrepancy between what individuals (or organizations or society) want themselves to be and what they are; the distance between an aspiration and a reality” (Knowles, 1980, p. 88). Needs assessments typically are designed to identify the gap between what is and what should be in terms of program practices (Wood, Thompson, & Russell, 1981).

Bertcher (1988) characterized the personnel preparation process as following a typical problem-solving model that can be stated in terms of need: recognition of need, a decision to do something about the need, an analysis of factors causing the need, generation of a strategy to reduce the need, implementation of the strategy, and evaluation of the degree to which the strategy reduced the need. Winton (1990) noted that this process is similar to the model used to address family needs, values, and goals in early intervention.

### Methods and Strategies for Identifying Needs

Needs assessment information is integral to the design and implementation of meaningful personnel preparation activities. Needs data can be obtained in a variety of ways, such as by using instruments, analyzing documents, conducting observations or interviews, or employing consensus techniques (see Table 6.1). Selected strategies associated with each of these data collection methods are listed in the table. For example, the nominal group technique is a strategy associated with the consensus method; portfolio review is a strategy

**TABLE 6.1.** Needs assessment methods and strategies

| Methods and strategies   | Description   | Potential advantages  | Potential disadvantages  | Recommendations for use  |
|--|---|---|--|--|
| <b>Instruments</b> <ul style="list-style-type: none"> <li>• Questionnaires</li> <li>• Checklists</li> <li>• Surveys</li> <li>• Scales</li> </ul> | Gathering data from individuals, groups, or entire constituencies using structured, written formats | <ul style="list-style-type: none"> <li>• They are quick.</li> <li>• They are low cost.</li> <li>• They are easy to distribute.</li> <li>• Data collection efforts can be directed at large numbers of respondents.</li> <li>• Respondents complete the same items.</li> <li>• They assess the needs from the learner's perspective.</li> <li>• Respondents can think about answers, access records, and so forth before answering.</li> <li>• They provide anonymity.</li> <li>• Respondents can choose to omit responses.</li> </ul> | <ul style="list-style-type: none"> <li>• Different meanings may be applied to items.</li> <li>• Single-source, self-report data may be incomplete or inaccurate.</li> <li>• There may be limited identification of specific content and processes to address individual needs.</li> <li>• There may be a tendency for people to indicate need in topic areas familiar to them.</li> <li>• Low return rates result in inaccurate portrayal of need.</li> <li>• They may not be appropriate for people with low literacy.</li> </ul> | <ul style="list-style-type: none"> <li>• Consider word choice, tone, and format prior to use.</li> <li>• Make sure instruments are brief, space is provided for comments, and items are grouped into logical categories.</li> <li>• Pilot-test instrument with individuals who are representative of respondent group.</li> <li>• Avoid use of double-barreled questions.</li> <li>• Explain purpose of needs assessment and planned use for data on the instrument.</li> <li>• Share summary of results with respondents.</li> <li>• Target individuals or groups to complete instrument, and limit generalizations of need to these people.</li> <li>• Format instructions for completion and return on the instrument.</li> </ul> |

### **Document analyses**

- Records
- Reports
- Planning documents
- Audits
- Work samples
- Written policies and procedures

Compiling and making inferences of need from descriptive statistics or narratives found in documents

- They are unobtrusive.
- They are nonreactive.
- They are grounded in the context under study.
- They can be used to verify information generated by other assessment methods.
- Data are already available.
- They provide historical context against which need may be evaluated.
- Data can be accumulated with a relatively low response cost to targeted individuals or agencies.
- Documents may be incomplete or contain inaccurate information.
- Documents are limited to a historical focus and may not reflect current need.
- Causes of problems or needs may not be discernible from documents.
- Access to documents may be limited as a result of legal or logistical constraints.
- Documents may be adjusted or selectively edited prior to review.
- Delimit the scope and nature of the document analysis.
- Search for patterns and trends of need that emerge across documents.
- Request that materials for document analysis be easily accessible to reduce time required for locating and examining documents.
- Obtain consent to examine documents, when appropriate.
- Use procedures for recording data that permit separation of specific indications of need from conclusions about need.
- Seek other sources of data to verify need data gathered from documents.

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(continued)

TABLE 6.1. (continued)

| Methods and strategies  | Description   | Potential advantages  | Potential disadvantages  | Recommendations for use  |
|---|---|---|--|--|
| <b>Observations</b>   | Watching people doing actual or simulated tasks or activities—individuals or groups of people can be observed                               |   |  |  |
| <ul style="list-style-type: none"> <li>Behavioral frequency counts</li> </ul> | <p>Capturing rate of occurrence of specific behaviors to identify need to acquire, modify, or change behaviors of individuals or groups</p> | <ul style="list-style-type: none"> <li>They help put importance or impact of specific behaviors into perspective.</li> <li>They can be used to clarify or verify needs of individuals or groups when used in conjunction with self-report need techniques.</li> <li>They can be used to quantify need.</li> </ul> | <ul style="list-style-type: none"> <li>It may be difficult to develop behavioral definitions.</li> <li>Behaviors quantified may not be appropriate; can lead to mis-specification of needs.</li> <li>Observer's presence may change behavior of person being observed.</li> <li>Watching people or groups generates attributed need data, not necessarily felt need data.</li> </ul> | <ul style="list-style-type: none"> <li>Carefully select and clearly define behaviors to be observed.</li> <li>Standardize data recording sheet and preserve anonymity.</li> <li>Institute steps to evaluate consistency of observations and data collection procedures across observers.</li> <li>Spend time observing in a natural setting prior to selecting and defining behaviors to be observed.</li> <li>Chart antecedents and consequences of targeted behaviors, whenever possible.</li> <li>Use low-key, nonassertive demeanor when observing.</li> </ul> |

- Critical incident observations

Observing and recording specific tasks or activities in defined situations to generate need data

- They collect data that reflect observable tasks or activities rather than ratings and opinions based on general impressions.
- Incidents can be analyzed singularly or in combination with one another.
- Accumulated critical incident observations can be used to make summative inferences about need.
- Precision of observations is heavily dependent on the competence of observer and the specificity with which the characteristic to be observed has been defined.
- They are a time-consuming, costly strategy for gathering need data.
- Gathering enough critical observations for need determination may be difficult.
- It is often difficult to make judgments about whether observed incident is "critical."
- Specify clearly the general parameters of the task or activity to be observed.
- Delimit the situations to be observed, including place, people, conditions, and activities or tasks.
- Provide examples of incidents that should be observed and recorded because of their relationships to the general parameters.
- Define an incident as critical if it makes a positive or negative contribution to the general parameters of the activity or task.
- Have recording sheets that reflect what you observed the individual or group doing and the outcome of what they did.
- Institute procedures for sorting observed incidents into piles of similar indicators of need.

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(continued)

TABLE 6.1. (continued)

| Methods and strategies | Description   | Potential advantages  | Potential disadvantages  | Recommendations for use   |
|------------------------|---|---|--|---|
| <b>Interviews</b>      | Talking to people to gather their perspectives related to need identification   |   |  |   |
| • Focus groups         | Process of acquiring need data from a group of 5–12 people familiar with topic, service, or experience being discussed; usually a facilitator who presides over group activities; focus group guide may be developed for use by facilitator | <ul style="list-style-type: none"> <li>• They have an informal structure.</li> <li>• Gathering need data in group form benefits from group dynamics.</li> <li>• They offer a rich, permanent data source.</li> <li>• They generate need statements for use on instruments or for verification with observational techniques.</li> <li>• They add qualitative dimension to need analysis.</li> <li>• They are an efficient means for gathering significant amount of data in a relatively short period of time.</li> <li>• They are unhindered by requirements for group consensus.</li> </ul> | <ul style="list-style-type: none"> <li>• There is a danger of getting off topic during discussions.</li> <li>• Transcribing, summarizing, and analyzing focus group data are time consuming and costly for the group sponsor.</li> <li>• The groups may not be representative of those to be involved in instruction.</li> <li>• The specific needs of individuals may be lost.</li> <li>• There is a possibility of bias in interpreting data.</li> <li>• More opinionated participants may dominate the group.</li> <li>• Participants may have concerns about confidentiality of comments made in focus group.</li> </ul> | <ul style="list-style-type: none"> <li>• Keep the group size "manageable."</li> <li>• Keep the length of group to less than 3 hours.</li> <li>• Verbatim recordings (either by audiotape or transcriber) are most helpful for later analysis.</li> <li>• Ensure participation of appropriate stakeholders in group.</li> <li>• Conduct the focus group at a neutral site.</li> <li>• Conduct the focus group around a comfortable table and have refreshments available.</li> <li>• Make the purpose of the focus group explicit.</li> <li>• Have participants identify themselves; nameplates on table helpful reminders.</li> <li>• Move from general to specific questions; ask open-ended questions whenever possible.</li> </ul> |

|   |   |   |   |  |   |
|---|---|---|---|--|---|
|   |   | <ul style="list-style-type: none"> <li>• They can facilitate identification of shared need among participants.</li> </ul>   |   |  | <ul style="list-style-type: none"> <li>• Keep comments non-judgmental and probe questions focused on information clarification; do not overfocus or overfacilitate a group.</li> <li>• Ask for clarification of technical terms, local jargon, and complex ideas to keep record clear.</li> <li>• Be ready to invest up to five times the length of the focus group in data analysis.</li> <li>• Follow up with focus group participants because it is critical to conduct member checks of focus group summaries.</li> </ul> |
| <ul style="list-style-type: none"> <li>• One-to-one interviews</li> </ul> | Gathering information from individuals about need by talking directly with them | <ul style="list-style-type: none"> <li>• They offer a rich data source.</li> <li>• Felt need data can be obtained directly from individuals.</li> <li>• Need can be clarified and verified during the interview.</li> <li>• Felt and attributed needs can be examined by interviewing people who hold different roles.</li> </ul> | <ul style="list-style-type: none"> <li>• They can be a time-consuming and costly process for interviewer.</li> <li>• Data collection and analysis can be complex.</li> <li>• Some individuals may not feel comfortable expressing needs in one-to-one context.</li> <li>• There is no protection from group members.</li> </ul> | <ul style="list-style-type: none"> <li>• Clarify the purpose of the interview for interviewee.</li> <li>• Develop a protocol to guide the interview.</li> <li>• Interview individuals from various constituencies involved in staff development.</li> <li>• Provide feedback to individuals about need data gathered through interviews.</li> <li>• Set reasonable time limits for the interview.</li> </ul> |   |

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(continued)

**TABLE 6.1.** *(continued)*

| Methods and strategies | Description | Potential advantages  | Potential disadvantages  | Recommendations for use   |
|------------------------|-------------|---|--|---|
|                        |             | <ul style="list-style-type: none"> <li>• They can validate needs expressed by interviewees.</li> <li>• They can provide each person with a sense of ownership about need data.</li> </ul> | <ul style="list-style-type: none"> <li>• Interviewees may feel pressured to respond to interview questions.</li> <li>• It may be difficult to establish rapport between interviewer and interviewee in a limited time period.</li> <li>• Self-reported needs may be inaccurate or at odds with attributed needs.</li> <li>• Respondent effects may be present (e.g., self-preservation bias).</li> </ul> | <ul style="list-style-type: none"> <li>• Avoid yes/no questions; ask open-ended, problem-solving questions.</li> <li>• Give interviewees time to think about responses. This may be the first time they have been asked to identify/clarify/verify their need.</li> <li>• Pilot interview protocol with people similar to those to be interviewed.</li> <li>• Always conclude with open-ended question (e.g., "What haven't I asked about?" "Are there other needs we haven't discussed?").</li> <li>• Use consistent recording strategy (e.g., audio-tape recording, note-taking transcriptions).</li> <li>• Possibly ask interviewees to rank identified needs at the end of the interview.</li> <li>• Let interviewees know whether interview data will be kept confidential.</li> </ul> |

- Critical incident interviews

Procedure for gathering need data in an interview format by asking individuals to describe incidents that specifically demonstrate need based on their own experiences or observations

- Structure is provided for the interview by focusing on the identification of relevant critical incidents.
- Incidents described during the interview can take the form of stories, reports, or observations.
- Interviews can be conducted with individuals or groups.
- Incidents described in interviews can be analyzed singularly or in combination with one another.
- Accumulated critical incident interviews can be used to make summative inferences about need.
- Precision of incidents described during the interview are heavily dependent on competence of interviewee.
- They are a time-consuming, costly strategy for gathering need data.
- Gathering enough critical incidents during interviews for need determination may be difficult.
- It may be difficult to make judgments about whether reported incidents are "critical."
- Clarify purpose of the interview for interviewee.
- Describe to interviewees why they are "qualified" to describe critical incidents.
- Provide assurances that all incidents described will be kept confidential and that names of people involved in incidents will be changed to preserve anonymity.
- Pilot-test the critical incident protocol with people similar to those who will be interviewed.
- Encourage interviewees to be factual, not interpretive, in their descriptions of critical incidents.
- Avoid leading questions.
- Be sure actual behavior(s) is reported when the incident is described.
- Ask interviewees if they directly observed the incident.
- Probe for complete descriptions of incidents.

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(continued)

TABLE 6.1. (continued)

| Methods and strategies   | Description   | Potential advantages   | Potential disadvantages  | Recommendations for use   |
|--|---|--|--|---|
|  |   |  |  | <ul style="list-style-type: none"><li>• Ask interviewees to state why they believe the reported incident is "critical."</li><li>• Have forms that can be used to record critical incidents described during the interview.</li><li>• Institute procedures for sorting identified incidents into piles of similar indicators of need.</li></ul>                |
| <b>Consensus techniques</b>  | Bringing knowledgeable people together "jury fashion" and tapping their collective opinions to guide identification of need   |  |  |   |
| <ul style="list-style-type: none"><li>• Delphi technique</li></ul> | <p>Procedure that uses sequential steps to solicit and collect informed judgments on a particular topic</p> <p>Judgments usually solicited through a set of carefully designed sequential questionnaires or on-line computer communications</p> | <ul style="list-style-type: none"><li>• Typology of needs can be determined or developed.</li><li>• Technique allows for the exploration of underlying assumptions or information leading to different judgments about need.</li></ul> | <ul style="list-style-type: none"><li>• There are many different versions of the Delphi technique described in the literature. It is difficult to find precise, consistent guidance about implementation.</li><li>• There is a lack of guidance about number of iterations required for closure.</li></ul> | <ul style="list-style-type: none"><li>• Develop relevant need scenarios for the questionnaire to which Delphi panelists can respond.</li><li>• Have a panel of experts to assist with questionnaire development and refinement.</li><li>• Implement retention strategies to keep all members of the Delphi group involved in successive iterations.</li></ul> |

Each successive questionnaire contains summarized information and feedback from earlier questionnaires provided in the form of measures of central tendency or percent agreement

Takes form of structured dialogue between people who may not meet but whose opinions about need are shared through questionnaires

- Technique can be used to educate respondent group about similarities and differences in needs.
- Participant responses can be kept anonymous.
- Sequential feedback is useful for refining and clarifying needs.
- It is relatively efficient for respondents.
- Technique can be done independently or in groups.

- Extreme positions may be lost through the iterative process.
- "Group think" may occur.
- "Risky shifts" may occur.
- Technique requires that Delphi leaders have skills in developing and modifying questionnaires.
- Highly structured emphasis may disillusion some participants.
- Time and effort involved in the iterative process is great.
- "Invisible" group if it does not meet face-to-face; loses advantages of social interactions among group members.

- Arrange for computerized data entry and analysis to expedite processing, feedback, and revisions of questionnaires.

- Priority matrix

A procedure in which identified needs are set against each other in a correlation-type matrix

Respondents indicate their priority for each pair of off-diagonal needs, which is recorded in each off-diagonal cell

- The matrix is quick and easy to complete.
- It uses forced-choice format to prioritize needs.
- It can be used by individuals or groups.

- The matrix is useful for prioritizing, not identifying, needs.
- Forced-choice format reduces opportunities for variations in need identification.

- Use to rank identified needs, not generate needs.
- Best used when the number of needs to be prioritized is relatively few.
- Provide clear instructions to respondents about how to complete the matrix.

TABLE 6.1. (continued)

| Methods and strategies  | Description   | Potential advantages  | Potential disadvantages  | Recommendations for use   |
|---|---|---|--|---|
|   | After all pairs are ranked, the needs with the highest number of priority ranks in the matrix are identified as the "priority needs"  | <ul style="list-style-type: none"> <li>• It offers an objective format for gathering subjective rankings.</li> <li>• Need data are summarized in an efficient format.</li> </ul>  | <ul style="list-style-type: none"> <li>• Respondents may apply different interpretations to need areas represented on the matrix.</li> <li>• Procedure is difficult to use when large number of needs contained in the matrix.</li> <li>• The matrix is not conducive to prioritizing needs when there is high disagreement among group members.</li> </ul>  | <ul style="list-style-type: none"> <li>• Be sure respondents understand that only one priority can be reflected in each cell (no ties).</li> </ul>  |
|   | Needs can be weighted   | <ul style="list-style-type: none"> <li>• The facilitator can use successive matrixes to refine need priorities.</li> </ul>  |  |   |
| <ul style="list-style-type: none"> <li>• Nominal group technique</li> </ul> | <p>Silent, individual, need identification, usually written, in a group setting followed by sharing individual ideas with the total group</p> <p>Group leader in round-robin fashion asks each participant to "nominate" one need</p> <p>Each need recorded, typically on large worksheets of paper displayed for entire group</p> <p>Need nomination process continues until all unique individual needs are reflected on worksheets</p> | <ul style="list-style-type: none"> <li>• Nominal group technique allows for individual and group identification of needs.</li> <li>• Each participant given opportunity to rank individual and group needs.</li> <li>• It encourages the presentation of all needs, not just majority needs.</li> <li>• Each member of the group participates in need identification and prioritization.</li> </ul> | <ul style="list-style-type: none"> <li>• Voting or rankings can be made without careful consideration.</li> <li>• Nominal group technique can be too structured for some participants.</li> <li>• "Group think" can occur.</li> <li>• "Risky shifts" can occur.</li> <li>• It may be difficult to reach consensus during need clarification process.</li> <li>• Process can become time consuming, and participants may lose interest or become aggravated.</li> </ul> | <ul style="list-style-type: none"> <li>• Set aside adequate time to complete entire nominal group process.</li> <li>• Arrange for a comfortable setting; have refreshments available and provide opportunities for participants to take short breaks.</li> <li>• Have an experienced recorder available who is not a member of the target group, if possible.</li> <li>• Remain nonjudgmental about identified needs.</li> <li>• Record need statements verbatim.</li> <li>• Maintain privacy of individual rankings, if participants so desire.</li> </ul> |

- Brainstorming

Discussion follows initial nominal activity to elaborate, add, eliminate, or combine needs

Following discussion, group leader asks each participant to rank needs from most to least important

Group leader tallies individual rankings and presents results to group

Relatively unstructured group process for need identification that encourages free expression of ideas about needs

Ideas are recorded in written or taped formats for later reference

May or may not be formally facilitated

- Individual members may benefit from hearing other members' perspectives about needs.
- Group members given opportunities to question, clarify, modify, combine, or eliminate needs.
- Recording format provides permanent record of the need identification and prioritization process.

- Brainstorming encourages group members to generate as many ideas as possible, whether good or bad.
- Can stimulate creative identification of needs.
- Nonthreatening, open-ended, and evaluative judgments are avoided.
- It may lead to the generation of novel needs.
- It is a nontechnical process.
- It is relatively time and cost efficient.

- Some participants may not be inclined to brainstorm.
- Lack of formalized structure in the group may lead to inefficient use of time and poor dynamics.
- Group members may condemn, verbally or nonverbally, novel or unique ideas.
- Needs generated by the group may be unfocused.
- It does not identify need priorities.

- Keep all data for potential future use (e.g., worksheets, individual rankings).
- Encourage expression of all needs that come to mind.
- Consider all expressed needs valuable; don't apply judgments during brainstorming.
- Record need statements verbatim.
- Publicly post generated needs to stimulate further need identification.
- Follow up activity to analyze and to prioritize needs identified during brainstorming activity is critical.

(continued)

TABLE 6.1. (continued)

| Methods and strategies | Description  | Potential advantages  | Potential disadvantages   | Recommendations for use   |
|------------------------|--|---|---|---|
| • Community forum      | Open meeting to which all members of community are invited and at which all participants are encouraged to present views regarding needs | <ul style="list-style-type: none"> <li>• Forum involves numerous stakeholders.</li> <li>• Views about needs based on perspectives obtained from a variety of people.</li> <li>• It is economical.</li> <li>• It facilitates the establishment of networks of individuals who share interests in particular need areas.</li> </ul> | <ul style="list-style-type: none"> <li>• Need identification and prioritization can become diffuse.</li> <li>• Forum involves need identification, but decisions about how needs will be addressed usually take place outside the forum context.</li> <li>• If forum is well attended, not every participant may have an opportunity to express needs.</li> <li>• Those individuals or groups not represented at the forum may not have needs represented.</li> </ul> | <ul style="list-style-type: none"> <li>• Invite participation of all relevant stakeholders at the forum by publicizing forum and issuing invitations.</li> <li>• Develop incentives for individuals or groups to be represented at the forum.</li> <li>• Allot time to be certain each individual or group who desires to speak can have an opportunity to share perspectives about need.</li> <li>• Clarify expectations about time limits at the beginning of and as needed during the forum.</li> <li>• Appoint a forum facilitator to moderate the forum.</li> <li>• Hold the forum in a location viewed as "accessible" and "neutral" for participants.</li> <li>• Facilitator should reiterate the focus of the forum at selected intervals in an effort to keep participants focused.</li> <li>• Arrange for verbatim recordings (either by audiotape or transcriber) for later analysis.</li> </ul> |

associated with the document analysis method. Table 6.1 also shows potential advantages, disadvantages, and selected recommendations for using each of the methods or strategies.

**Instruments** Instruments can reach large numbers of and widely dispersed respondents. Factual or subjective needs data can be gathered with relative ease once the instrument has been developed or obtained. Respondents have an opportunity to indicate their perspectives about needs; however, they often are required to share these views in a predetermined format. The structure imposed by most instruments can reduce opportunities for identifying idiosyncratic needs. Respondents completing the instruments often do not have an opportunity to talk directly with needs assessors to clarify or verify their needs. Low return rates and inappropriate responses can limit the accuracy of the needs assessment data obtained from instruments (American Society for Training and Development, 1985).

**Document Analysis** Document analysis strategies are useful when the identified problem might be reflected in permanent products or records of performance by those potentially targeted for personnel preparation. For example, if the problem is lack of sufficient family-centered focus in an agency, individualized family service plans (IFSPs) could be reviewed to analyze the extent to which they reflect family-centered principles and recommended intervention practices. Patterns and themes that emerge from document analysis provide staff developers with contextually relevant needs data based on stable products or records. Documents, however, may be incomplete or contain inaccurate information. The information in documents is constrained by legal requirements, agency policies and procedures, or the types of products individuals choose to place in portfolios. Although participants usually are involved in the production of documents or records, they are not necessarily directly involved in the document review process. This lack of involvement may prohibit participants from explaining or extending the data staff developers gather from documents.

**Observational Strategies** Observational strategies, such as frequency counts and critical incident observations, are useful when the identified problem can be observed under natural conditions and when most of the needs information sought is visible (Zemke & Kramlinger, 1982). Observational strategies usually require a minimal level of involvement by those being observed. These strategies, however, require that the needs assessor devote a significant amount of time and resources to data collection and analysis. Another limitation of observational strategies is the potential for decreased participant commitment to the personnel preparation process because needs have been identified by an observer and not by the learners themselves. Finally, individuals may exhibit reactivity in the presence of observers and behave differently than they would under typical circumstances.

**Interviews** Interviews, whether conducted with individuals or groups, provide the learners with direct opportunities to express their needs. Needs can be clarified and verified during the interview process through the use of probes, open-ended questioning, and requests for examples. Individual or group interviews can be conducted face-to-face or over the telephone or Internet. Interviews are flexible methods for gathering needs data, but the quality of the data depends largely on the skills and sensitivities of interviewers. Each of the interview strategies listed in Table 6.1 requires a large investment of personnel time for conducting the interviews and analyzing and interpreting the data.

**Consensus Techniques** Consensus techniques are most useful when staff developers encounter groups of individuals with strong or discrepant opinions about needs. These strategies can be used to foster cooperation and commitment while reaching some degree of agreement about individual or group needs. A variety of consensus strategies are listed in Table 6.1. Each takes a slightly different approach to building consensus and

determining needs. Most of the strategies require a significant investment of time on the part of learners. Another limitation is that idiosyncratic needs of individuals may be lost to the group when these strategies are used.

**Other Formal Methods** There are other methods not described in Table 6.1 that can be used to gather needs data. These include network analysis (Neenan, Orthner, & Crocker, 1995), job and task analysis (Zemke & Kramlinger, 1982), and written performance tests designed to evaluate an individual's knowledge, skill, or attitudes.

Network analysis can be used to illustrate interactions and relationships among individuals or agencies. Data for the network analysis can be gathered by using instruments or by conducting interviews or observations. In network analysis, individuals or groups may be asked to describe the roles or functions of other individuals, groups, or agencies; the interrelationships among individuals, groups, or agencies; or typical patterns of service used by consumers across various professionals, groups, or agencies. Needs for community-based personnel preparation efforts, as described in Vignette 3, could be clarified and verified from a network analysis.

Job and task analysis involves "collecting, tabulating, grouping, analyzing, interpreting, and reporting on the duties, tasks, and activities that make up a job" (Caffarella, 1994, p. 74). Many of the methods described in Table 6.1 can be used to gather data about a job or task (e.g., observations, document analyses, interviews, instruments). This method of needs determination is accomplished most easily when the job or task occurs repeatedly, has a specific purpose and a defined beginning and end, involves people's interaction with equipment or other people, and results in a meaningful outcome (Zemke & Kramlinger, 1982). For example, in Janet's story, the workshop leaders could have analyzed the tasks or activities involved in teachers' or therapists' implementing a routines-based approach to early intervention in preschool settings. Results from this analysis could be used to guide decision making about workshop content and format and to structure evaluation and follow-up activities.

Written performance tests are used to evaluate an individual's knowledge, skill, or attitudes. Needs data are generated based on information about current performance levels. Staff developers who use these types of tests to gather needs data should ensure that the measure yields adequate indexes of reliability and validity based on data obtained from the respondent sample. The measure should be matched to the identified problem. In Vignette 1, a knowledge test on the Part H referral process might be an appropriate performance measure; a test of skill would be inappropriate given the identified problem.

**Informal Strategies** There are a variety of informal, on-the-spot pre- or during-instruction strategies that staff developers can use when they are unable to conduct comprehensive needs assessments before the personnel preparation event. Several commonly used pre- or during-instruction strategies are listed in Table 6.2. The purpose of using these strategies is to ensure that participants feel a sense of ownership in the personnel preparation process, even though their individual or collective needs were not necessarily considered before the instructional event. Several of these strategies can form the basis for subsequent evaluation or follow-up activities (Zemke & Gunkler, 1985).

### **Guiding Questions Related to Selecting Needs Assessment Strategies**

Knowing which needs assessment strategies to choose for a given personnel preparation circumstance is a major decision staff developers must make. Newstrom and Lilyquist (1979) offered six criteria to consider when selecting needs assessment strategies. First, what level of learner involvement is desired? There is consensus in the personnel preparation literature that, whenever possible, learners should be involved in the needs assess-

**TABLE 6.2.** Pre- or during-instruction informal needs assessment strategies

| Strategy              | Description   |
|-----------------------|---|
| Executive memo        | Instructor or supervisor sends a letter to participant describing the purpose, structure, and desired outcomes from the staff development event; indicates the significance of the event for the individual or organization; and communicates attributed needs to participant.  |
| Self-assessments      | Simple pretests or self-assessment instruments are used to prepare participants for instruction. Participants are provided with the opportunity to preview instructional content, and insight is given into what they do or do not know about a topic.  |
| Supervisory briefing  | If administrators or supervisors cannot attend the instruction, a briefing is conducted for these individuals to familiarize them with what the participants will be learning in the staff development activity. Strategies they can use to support participants' transfer of learning after the instructional event are suggested. Participants are told about the supervisory briefing at the beginning of their instruction event.   |
| Expectations opener   | Participants are asked to generate, individually or in groups, two or three things they want to be able to do or know as a result of the instruction. The instructor records the expectations on a flipchart. When all expectations have been voiced, the instructor either describes which expectations will and will not be met or modifies the instructional event to meet identified expectations.  |
| Objectives opener     | Instructors hand out a list of objectives to participants. Instructors discuss the objectives. They may provide participants with opportunities to modify objectives or to generate additional objectives.  |
| Clarifying the agenda | Instructors distribute copies of an agenda to participants. Instructors discuss the agenda. They may provide participants with opportunities to modify the agenda or generate additional agenda content.  |
| Burning questions     | At the beginning of the instructional session and throughout it instructors can ask participants to generate burning questions. Time can be reserved to address burning questions at selected points during the instruction or the instructor can review the burning questions during breaks and modify instructional content in response to these questions. Participants also can be encouraged to find answers on their own, by talking with other participants or conducting follow-up activities after the workshop. |

ment process and programs should be planned in response to their assessed needs (e.g., Buckley & Mank, 1994; King, Hayes, & Newman, 1977; Thompson & Cooley, 1986; Winton, 1990). Second, what levels of organizational needs should be recognized? Strategies should facilitate, when possible, the gathering of multisource needs data from supervisors and other people in the organizational setting. Third, what are the time requirements for gathering the information? Individual interviews with potential participants, for example, consume more time than nominal group techniques. Fourth, what is

the cost of using various methods or strategies? Using existing instruments to gather needs data is less costly than conducting on-site observations. Fifth, what types of data are required? Different strategies may be appropriate if the focus is broad-based group consensus versus more narrow assessments of the needs of targeted individuals. Sixth, how can the relevance and quantifiability of the data be ensured? Questionnaires may not be a relevant needs assessment strategy when highly individualized data are needed.

No one method or strategy for gathering needs data is inherently better than another (Caffarella, 1994). As illustrated in Table 6.1, each of the techniques has strengths and weaknesses. Data collection options include formal and informal methods, broad-based and narrow assessments, and group and individual techniques. Use of multisource, multi-method data-gathering strategies is preferred to capitalize on the strengths and reduce the impact of the limitations associated with each of the methods. Regardless of the needs assessment method or strategies chosen, a formal needs assessment should involve the interrelated processes of defining objectives for the needs assessment; determining who will be involved in planning and conducting the needs assessment; determining a time frame and budget for the needs assessment process; choosing a design and methods or strategies for gathering data, considering the instructional context, target audience, and target outcomes; collecting data; analyzing data; and reporting results of the needs assessment to appropriate individuals and groups (Caffarella, 1982, 1994; Tracey, 1992).

**Using Needs Assessment Data** Once gathered, needs data can be used for a variety of purposes. Trohanis (1994) noted that needs assessment data are tabulated, analyzed, and interpreted so that priorities and a focus for personnel preparation content become clear. Needs data can assist with the identification of who training participants are, clarify the roles participants assume relative to the personnel preparation topic, and illuminate expectations of participants for how a personnel preparation event can benefit them. Data can be analyzed to identify incentives for participation in instructional events. Needs data also can be used as a basis for evaluating the impact of personnel preparation efforts. Results from a needs assessment should be shared with those who participated in the needs assessment process. This can involve making presentations to targeted audiences, writing reports that summarize findings, or describing in subsequent personnel preparation events how needs data were used to design programs.

### **Challenges Related to Conducting Needs Assessment**

Although Table 6.1 shows a variety of strategies available for gathering data, challenges remain for early intervention staff developers who want to conduct meaningful needs assessments. The following sections describe several of these challenges and offer possible options to address them.

**Whose Needs Are We Talking About?** One challenge surrounding needs assessment is difficulty in defining the term *needs* to effectively assess them. “Need is at best a relative concept and the definition of need depends primarily upon those who undertake the identification and assessment process” (Siegel et al., 1978, p. 216).

Bertcher (1988) defined three types of needs that might be assessed: 1) felt, 2) attributed, and 3) organizational. *Felt needs* arise in situations where individuals sense the absence of something important to them in doing their job. Janet had a felt need to learn more about integrated therapy and routines-based intervention because she believed it was important to her job. Needs assessment surveys administered to an individual or group usually assess felt needs (Timms, 1995). *Attributed needs* originate when one individual believes another individual has a particular need; for example, an early intervention supervisor believes that a teacher has a need for learning about family-centered intervention.

When only attributed needs are assessed, resulting decisions about personnel preparation are made by people other than the learner. *Organizational needs*, according to Bertcher, are those things the organization must have or must do to continue to exist and fulfill its mission. For example, early intervention program administrators may need all agency employees to learn about Medicaid reimbursement procedures to continue service delivery.

Knowles (1980) described another type of need—educational. He suggested these needs are most commonly assessed when planning programs for adult learners. Educational needs, according to Knowles, are those things that people ought to learn for their own good, for the good of an organization, or for the good of society.

To address the challenge of defining needs from an ecological perspective, Bertcher's and Knowles' conceptualizations of needs could be combined. Bertcher's three types of needs might exist within and across the nested levels described by Knowles (e.g., individual, group, community, state, nation). Members of the community in Vignette 3, for example, expressed a felt need related to establishing service delivery in natural environments for young children with disabilities. They each felt differently, however, about how this need should be addressed. Outside technical assistance consultants may attribute needs to this community or to groups within the community. State policies related to the early intervention program may create organizational needs for the community.

As needs assessments are undertaken, staff developers should be aware of the types of needs they are assessing and at which levels they are assessing them. Various levels and categories of needs can be defined, and no one definition probably is adequate or complete for every use (Timms, 1995).

**How Can Needs Be Clarified and Verified?** A second challenge involves clarifying and verifying expressed needs, whether felt, attributed, or organizational. If two early interventionists state that they feel a need for instruction in family service coordination, do they mean the same thing? One interventionist might mean that she has a felt need to learn what service coordination is, whereas the other may want to learn better strategies for coordinating services across agencies. In Janet's story, for example, interventionists applied different meanings to the terms *integrated therapy* and *routines-based intervention*.

If an early intervention program director states that her staff need instruction in principles of family-centered service delivery, what does this mean? Furthermore, once her attributed need is clarified, it could be verified with staff members and families.

Gallegos (1979) recommended that needs, however defined, should be clarified and verified. He noted that assessing gross categories of needs does not provide adequate data from which to make informed personnel preparation decisions. Gallegos proposed that "more should be done to develop and refine multilevel, cross-validated assessment techniques . . . so that single level or single source 'needs' are not the sole basis for inservice efforts" (p. 23). Judgments about needs are most valid when multiple sources and methods are used and when adult learners themselves, and relevant others, contribute to the needs identification process (Knox, 1986).

**How Can Agreement About Needs Be Achieved?** Felt, attributed, or organizational needs across various levels may not be congruent. What teachers say they need may or may not conform to what supervisors believe is needed. Observations of performance by outsiders may reveal needs not identified by teachers or supervisors. Family members might have an entirely different perspective about needs. Knowles (1980) stated,

The more congruent the needs of individuals are with the aspirations their organizations and society have for them (or the other way around—the more congruent the aspirations of orga-

nizations and society are with the educational needs of individuals), the more likely effective learning will take place. (p. 88)

Knowles believed that an important role for the staff developer is to use skill and sensitivity to help groups assess the needs of individuals, organizations, and society; negotiate congruence among them; and stimulate the translation of needs into personnel preparation goals. The consensus strategies described in Table 6.1 may be used to help reach congruence.

Another promising approach for fostering congruence of needs is the team-based model for change (Bailey, McWilliam, & Winton, 1992; Bailey, McWilliam, Winton, & Simeonsson, 1992; Winton, McWilliam, Harrison, Owens, & Bailey, 1992). This model is described in Chapter 20, which contains a detailed account of how this approach to needs assessment is being used in early intervention. A major feature of the team-based model is gaining consensus about organizational needs while considering interventionist and family needs. This aspect of the model is accomplished by providing teams, composed of a variety of stakeholders, with the opportunity to rate actual and desired levels of family-centered practices at individual and organizational levels.

Similar to the needs discrepancy model described by Knowles (1980), emphasis in the team-based model is placed on assisting individuals and groups to self-diagnose needs. Competencies or characteristics required to achieve a given model of performance associated with family-centered service delivery are indicated in a set of instruments (FOCAS [Bailey, 1991]; Brass Tacks [McWilliam & Winton, 1990a]; The Family Report [McWilliam & Winton, 1990b]). Teams and individuals are provided with the opportunity to assess their policies and practices compared with those portrayed on the instruments. This process assists individuals and teams to measure the gaps between their actual and desired practices.

Two perspectives related to congruence may emerge from this team-based process: First, the level of congruence between the actual and desired practices at the individual and agency level surfaces; and second, congruence, or lack of congruence, between individual and organizational needs emerges. The discrepancy model is successful because “the more concretely individuals can identify their aspirations and assess their present levels of competencies in relation to them—the more exactly they can define their educational needs—the more intensely they will be motivated to learn [reduce the gap]” (Knowles, 1980, p. 88). The team-based model provides a concrete way to assess needs and gives many diverse stakeholders a voice in the process.

When individuals with diverse needs are provided with the opportunity to express felt needs and collectively review organizational needs, they are more likely to remain interested in and supportive of priorities targeted for personnel preparation. This seems to be the case even when these targets do not specifically meet their individual needs. The needs assessment process in the team-based model also can keep individuals aware of linkages between the assessment process itself, what was learned from the process, and how needs assessment priorities eventually are linked to personnel preparation activities.

**How Are Values Accommodated in the Needs Assessment Process?** The definition of needs assessment given previously noted that the process involves application of judgment. An individual or group makes value-based judgments during each phase of the process. Regardless of how needs are defined, whose needs are assessed, and at what levels needs are determined, the identified needs are filtered through and influenced by the perspectives of individuals responsible for translating information into personnel preparation priorities (Siegel et al., 1978).

McKillip (1987) and Monette (1977) noted that it is important for personnel developers to acknowledge that the needs assessment process is value laden. Needs analysis is more meaningful when the contributions of values to the process are made explicit rather than left implicit. Value-based choices may facilitate or impede the needs assessment process. For example, during the construction of a needs assessment survey, the values of the developers of the instrument influence the content and structure of the measure. The effect of this set of value-based choices could be to enhance needs identification for those whose values are congruent with the developers' values or to hamper needs description for those who have different values.

**Can People Always Recognize Their Needs?** People may not always have sufficient knowledge about a topic area at a particular point in time to participate adequately in needs assessment activities. Janet, for example, had limited knowledge about integrated therapy. Although she identified a general need to know more about this approach, she probably could not have diagnosed her specific learning needs before attending the workshop. Cameron (1988) defined the tendency for an individual or group to base perceptions of needs on what is available or known to them as "bounded rationality."

Winton (1990) suggested a strategy to overcome this problem. She described a process in which specific information about an innovation is presented. This information is accompanied by a series of guided questions that could be used to stimulate discussion of needs. In her example, the mandated components of an IFSP were specified. A series of questions related to each mandated component was posed. This format could be used to inform individuals about the innovation while simultaneously involving them in needs assessment.

**How Might the Scope of the Needs Assessment Be Determined?** How broad should a needs assessment be? Needs assessment can occur across multiple levels (e.g., individual, group, organization, community, state, nation). Multilevel needs assessment can be informative, necessary, appropriate, and feasible. Often, however, the scope of the needs assessment is limited to one or two levels as a result of economic or resource constraints. Determining which levels of need to assess in these circumstances should be tied directly to the ecology in which personnel preparation activities will be implemented.

Personnel preparation activities resulting from a broad-based, statewide needs assessment survey concerned with instructional needs in topics of infant mental health, for example, are unlikely to reflect specific organizational needs or felt needs of individuals. The more broad based and distal the assessment is from the personnel preparation ecology, the less likely that personnel preparation activities will meet needs and result in meaningful change at the individual or organizational level.

**Is Needs Assessment Always Necessary in Personnel Preparation?** Assessments of felt needs may not be necessary if what people need to learn about are practices mandated from more distal systems. The lead agency in Vignette 1 had an organizational need that arose from federal mandates for individuals to learn about the early intervention system and the role of primary referral sources. A needs assessment, conducted to identify individual felt needs, probably would not be necessary or useful in this situation. People participating in the personnel preparation activities, however, should be told why the need to know has been imposed on them.

Participation in group assessments represents only one way individuals may identify needs and engage in the personnel preparation process. In some cases, needs are better addressed by individual assessment and personnel preparation initiatives instead of through formal needs assessments involving groups of individuals. Self-study, continuing educa-

tion, journal reading, team-based interactions, and other forms of learning also contribute to individual needs identification and development.

### **Summary of Needs Assessment Issues**

The ultimate goal of the needs assessment process is to ensure that needs assessment data are meaningful. Needs are not static; thus, needs assessment data can become obsolete rapidly. Instruction must be based on up-to-date needs assessment data if meaningful outcomes for personnel preparation participants are to occur. Options for maintaining the meaningfulness of needs assessment data include repeating needs assessments at regular intervals, verifying previously compiled needs data immediately before a personnel preparation event, and having participants state instructional needs or goals during a workshop (Corbett, 1992).

Although the challenges described related to conducting needs assessments may appear formidable, there are strategies and options for addressing these challenges. Meaningful activities will be more likely to occur if people involved in early intervention personnel preparation evaluate the strategies outlined in Table 6.1 in a context that considers the challenges and options. No one model or strategy should be used across all contexts. Needs assessments are characterized by a variety of purposes, strategies, and outcomes. Strategies used in personnel preparation efforts should reflect an appreciation for these variations.

The majority of instructional activities in early intervention would benefit from more systematic attention to the needs assessment process, both at individual and group levels. Carefully designed and applied needs determination procedures contribute direction to personnel preparation efforts not otherwise available. The nature of felt, attributed, and organizational needs can be discovered and meaningfully displayed by well-conceived and executed needs assessments.

## **EVALUATION**

Since the 1970s, the emphasis on evaluation in the personnel preparation literature has expanded greatly. Personnel instructors are asked to demonstrate the effectiveness of their programs by a wide variety of constituency groups. Effectiveness, however, is a relative term. Personnel preparation can be considered effective if it satisfies participants, encourages their knowledge acquisition, results in skill acquisition or refinement, or modifies their attitudes. Two other types of effectiveness receiving increased attention are measuring the degree to which instruction enhances participant performance beyond the instructional context and demonstrating linkages between personnel preparation efforts directed toward participants and positive changes in children or consumers of services (Bertcher, 1988).

Yet as Knox (1986) noted, few aspects of personnel preparation generate more concern and less action than program evaluation. One reason for inaction may be explained by the difficulties in documenting that positive changes in participants or consumers of services are related directly to instructional efforts. These types of program evaluation questions are difficult to answer.

In this section, evaluation is considered as a separate component of personnel preparation. This section defines evaluation, describes major purposes for conducting evaluation, provides a brief review of evaluation emphases, suggests concrete evaluation guidelines and strategies, and identifies challenges associated with designing and implementing meaningful evaluation. In exploring evaluation issues in personnel preparation, the conclusion that evaluation is inextricably linked to needs assessment and follow-up

will emerge. Staff developers generally agree that effective evaluation should be part of each component of planning personnel preparation and all aspects of the teaching–learning transaction.

### **Definitions of Evaluation**

Many definitions of evaluation have been offered in the personnel preparation literature. There are more than 100 definitions of program evaluation (Steele, 1988). Grotelueschen (1986) stated that the definitions used for evaluation vary depending on the intended use of acquired information. Definitions of evaluation also can vary according to the scope of the evaluation (e.g., evaluation of a single instructional session versus evaluation of a cluster of educational activities such as a course). Finally, the literature related to evaluation of instruction and program evaluation do not always use the same definitions.

Nevertheless, several definitions can be proposed. Caffarella (1994) defined evaluation as “a process used to determine whether the design and delivery of a program were effective and whether the proposed outcomes were met” (p. 119). According to Caffarella, the heart of program evaluation is judging the value or worth of the program. Stufflebeam (1973) described evaluation as the process of delineating, obtaining, and providing useful information for judging decision alternatives. Finally, Steele (1988) noted four definitions of evaluation useful for staff developers. These include defining evaluation as the process of 1) describing a program, 2) judging a program against criteria, 3) answering critical questions about a program, and 4) determining the value of a program. She stated that program evaluation efforts can aim at one or all of these definitions.

Knox (1986) noted several common elements expressed in the definitions. First, most call for a description of the educational program, including the purpose of the evaluation, needs and preferences of the audience, nature of the program, and the context in which it operates. Second, judging worth or determining value implies gathering data to make value judgments. Like needs assessment, evaluation is value based, and values should be acknowledged explicitly in program evaluation efforts. Third, most definitions suggest data are gathered to make decisions; however, decisions can be made at many levels. For example, participants can decide if the program is worthwhile, instructors can decide how they would like to modify their instructional activities, and administrators can decide if instruction results in practice changes.

In addition to defining evaluation generally, program evaluators distinguish formative and summative evaluation. Dick (1987) described formative evaluation as a process employed to collect data and information to revise instruction. Formative evaluation, therefore, is performed to improve or change a program. Formative evaluation can focus on evaluating instructional questions, examples, practices, sequences, pacing, and reinforcement. Summative evaluation efforts focus on results or outcomes of the personnel preparation program. For example, participant satisfaction, effects on learner performance, changes in attitudes of participants, and benefits to others are types of outcome evaluations.

In practice, a combination of formative and summative evaluation efforts is most useful (Knox, 1986). Summative evaluation provides the most convincing evidence of outcomes. This information is of limited value, however, without knowing what practices or products contributed to program successes or failures.

### **Purposes of Evaluation**

There are several major purposes for evaluation. One is to provide feedback to instructors, participants, and decision makers to guide program decisions. Evaluation decisions encompass program planning, improvement, and justification activities. Proof of causality,

demonstrating that a program produced certain effects, is another major purpose of program evaluation (Steele, 1988). Steele noted that program evaluators typically focus evaluation efforts around proof of causality and not program improvement and stated that both purposes are relevant for program evaluation.

Grotelueschen (1986) characterized the purposes of evaluation according to three categories, which correspond to the timing of the evaluation. When evaluation activities focus on past activities or outcomes, the purpose usually is justification or accountability. This is synonymous with what Scriven (1967) called summative evaluation. A focus on current program activities typically is for the purpose of program improvement and is known as formative evaluation. Finally, when the focus is on possible future actions, sometimes known as evaluation in advance, the purpose of evaluation is similar to a needs assessment. Walsh and Green (1982) characterized evaluations performed to contribute to planning as needs assessments, evaluations performed to improve present practices or products as formative evaluation, and evaluations performed to justify a practice or program as summative or impact evaluation. Integrated needs assessment, follow-up, and evaluation efforts, therefore, produce formative and summative evaluation data.

### **Types of Evaluation Emphases**

Early efforts in personnel preparation evaluation were characterized mainly by gathering satisfaction data from learners. Buckley and Mank (1994) noted that end-of-session recipient satisfaction measures still are being used as “defaults” in many instruction and technical assistance contexts. Satisfaction measures can include assessments of the instruction site, logistics (including food and room temperature!), presenter’s delivery and knowledge, the degree to which content matches learner expectations, and learner satisfaction with instructional content. Satisfaction evaluations can be used to shape future instruction, and the data provided can be useful in many evaluation contexts. Placing sole reliance on these measures is problematic, however, because high satisfaction is not guaranteed to translate into quality outcomes for participants, agencies, children, and families (Buckley & Mank, 1994). Most program evaluation experts recommend the use of broader and more detailed conceptions of evaluation in personnel preparation efforts (e.g., Cervero, 1984; Knox, 1986).

Young and Willie (1984) conducted a literature review to examine how staff developers evaluated the effectiveness of continuing education programs for allied health professionals. These authors discerned four levels of evaluation across the reviewed studies. The first level of evaluation, prominent in the 1960s and 1970s, was participant satisfaction. A second level of evaluation, prominent in the 1970s, focused on acquisition and retention of knowledge, formation and modification of attitudes, and development of skills. During the 1980s, program evaluators in allied health moved to a third level where they evaluated whether changes in knowledge, skill, or attitudes ensured application to practice. Finally, a fourth level of evaluation involved examination of the impact of instruction on consumers. Compelling arguments for broadening evaluation efforts to encompass all four levels, when appropriate, are being raised in the personnel preparation literature. Young and Willie (1984) documented that these efforts are beginning in allied health continuing education; however, they acknowledged that most evaluation efforts continue to be characterized by poor attention to using an array of evaluation levels or strategies. This statement is supported by a number of authors who reviewed evaluation studies in medicine (Bertram & Brooks-Bertram, 1977), allied health (Turnbull & Holt, 1993; Walsh & Green, 1982), nursing (Faulk, 1984), and education (Daresh, 1987; Edelfelt, 1981).

## Evaluation Strategies

Early intervention personnel instructors should view evaluation as a circular process that begins in the planning phase of personnel preparation. Follow-up and impact data, for example, become needs assessment data to guide future personnel preparation efforts. Through each phase of the personnel preparation process, early intervention instructors should state clearly and understand fully the purposes and scope of their evaluation. Planned evaluation strategies should be matched to the goals established for personnel preparation. Goals can include specification of desired participant outcomes. Instructors and the instructional context also can be evaluated. Staff developers should plan, whenever feasible, to gather evaluation data at different levels of the system (e.g., individual, agency). Multisource, multidomain, multimethod data collection strategies are superior to strategies that focus on a single source, domain, or method.

A variety of evaluation strategies are proposed in the personnel preparation literature. Table 6.3 lists example evaluation strategies that could be used in early intervention efforts. These strategies are discussed according to a conceptual framework proposed by Cervero (1988), which includes seven categories of evaluation: 1) program design and implementation; 2) learner participation; 3) learner satisfaction; 4) change in learner knowledge, skills, and attitudes; 5) application of learning after the program; 6) impact of application of learning; and 7) program characteristics associated with the outcomes. Within each of these categories, evaluation questions can be posed, and a variety of evaluation methods or strategies can be used to gather data.

**Program Design and Implementation** This category of evaluation includes factors related to how the program is designed and implemented, including activities of learners or instructors, characteristics of the setting, and the nature of the teaching–learning transaction (Cervero, 1988). Sample evaluation questions that might be asked in this category are, “What methods were used to deliver program content?” “How comfortable was the room arrangement for participants and instructors?” or “How much time did the instructors allow for skill practice?” Instructors, participants, and other program planners can be sources of data for this category of evaluation. For example, participants, instructors, and observers could be asked to evaluate whether planned topics were covered. These three sources of evaluation data could be analyzed for areas of agreement or disagreement. Instrument, observation, and interview methods could be used to gather data in this category. Cervero (1988) noted that evaluations in this category usually require a minimal amount of effort, yet produce quite useful evaluation data. Data gathered in this category offer evaluations of current program design and implementation efforts and also could be used to plan future personnel preparation activities.

**Learner Participation** This category of evaluation is concerned with issues such as the number of people who participated in the personnel preparation event, participation of various stakeholder groups in the instruction (if appropriate), and levels of learner participation across activities. For example, for Janet’s story, learner participation data would identify that some individuals left the instruction for the mall. Relatively simple data collection strategies can be used to gather learner participation data, including head counts and data gathered from attendance rosters. Perspectives about learner participation can be gathered from participants and instructors using rating scales or tally sheets. A participant observer could conduct observational scans to determine learner participation throughout the instruction session. Cervero (1988) noted that learner participation data, although often overemphasized at the expense of other evaluation alternatives, are impor-

**TABLE 6.3.** Examples of evaluation strategies

| Evaluation strategy                                 | Description  | Rationale for the strategy   | Options for gathering data   | Formats for data collection  |
|---|--|--|--|--|
| Satisfaction measurement                            | Any evaluation procedure in which individuals (instructors or participants) rate their level of satisfaction with the overall instructional experiences or components of the instruction | These are judgments based on the subjective impressions of raters. These measures are generally easy to develop and administer, cost-effective, and straightforward in their interpretation. Satisfaction measures can be used in formative evaluation for further development of instruction and as summative evaluation data to help describe instructional outcomes (e.g., levels of satisfaction). | <ul style="list-style-type: none"> <li>Information about instructional content, educational process, the instructor, physical facilities, and cost can be obtained.</li> <li>Satisfaction data can be obtained on the spot while instruction is occurring to determine whether modifications to program should be made.</li> <li>Satisfaction data can be gathered at the end of various sections of the instructional event, at the conclusion of the instructional event, or days or weeks after the instructional event.</li> </ul> | <ul style="list-style-type: none"> <li>Instruments</li> <li>Informal conversational approach</li> <li>Semistructured interview using guiding questions</li> <li>Standardized open-ended interview</li> <li>Telephone interviews</li> <li>Critical incident interviews</li> </ul> |
| Self-ratings of knowledge, skills, or effectiveness | Any evaluation procedure in which individuals (instructors or participants) rate current levels of their skills, knowledge, or effectiveness   | A major goal of many instructional experiences is to increase the skills, knowledge, or effectiveness of participants. Self-ratings are useful for gathering data about the participants' perspectives about change. Ratings scales generally are economical to develop and administer. Self-rating may help the participants reflect on their experiences and gains.                                  | <ul style="list-style-type: none"> <li>Instructors or participants can be asked to rate their current knowledge about certain practices, their skill in implementing practices, or the efficacy of their skill implementation.</li> <li>Self-rating data can be gathered before instruction, during instruction, at the conclusion of instruction, or during follow-up.</li> </ul>   | <ul style="list-style-type: none"> <li>Instruments</li> <li>Interviews</li> <li>Role playing/discussion</li> <li>Case discussions</li> </ul>   |

## Attitude measures

Any evaluation procedure in which individuals (instructors or participants) indicate the direction of their feelings about something

Four change areas frequently are targeted in instruction: attitude, knowledge, skill, and practice. The interrelationships of these areas are acknowledged, but the order in which changes occur is debatable. Whether changed attitudes foster skill change or vice versa is one issue. Attitude change is considered important for maintaining or using new skills over time. Attitude measures can be relatively inexpensive to develop and administer. These measures can assist people to reflect on current attitudes and the relationships of these to information presented during staff development.

- Words typically used in attitude questions can include *favor* versus *oppose*, *prefer* versus *not prefer*, *should* versus *should not*, *good* versus *bad*, *right* versus *wrong*, and *agree* versus *disagree*.
- Free- or fixed-response questions can be used on attitude measures.
- Likert scales or Likert-type scales can be used to quantify dimensions of attitude.
- Other scaling options can include semantic differential, Thurstone, or Guttman scales.

- Instruments
- Interviews

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(continued)

**TABLE 6.3.** *(continued)*

| <b>Evaluation strategy</b>               | <b>Description</b>   | <b>Rationale for the strategy</b>  | <b>Options for gathering data</b>   | <b>Formats for data collection</b>  |
|--|--|--|---|---|
| Knowledge and skill acquisition measures | Evaluation procedures used to quantify or qualify changes in knowledge or skill related to staff development | Two primary interests in many staff development contexts are knowledge or skill acquisition. This category of evaluation focuses on what the learner or instructor is expected to know or be able to do at the end of the instructional event. | <ul style="list-style-type: none"> <li>• Direct or indirect measurements can be used to confirm or infer changes in knowledge or skills.</li> <li>• Knowledge measurement can involve assessment of knowledge, comprehension, application, analysis, or synthesis.</li> <li>• Skills can be assessed in simulated or actual situations.</li> <li>• Skill acquisition can be evaluated by assessing live performance or by reviewing portfolios or taped samples.</li> </ul> | <ul style="list-style-type: none"> <li>• Instruments</li> <li>• Portfolio review</li> <li>• Performance rating scales</li> <li>• Observational methods</li> <li>• Interviews</li> <li>• Role play/discussion</li> <li>• Case discussions</li> </ul> |

|                        |   |   |  |  |
|------------------------|---|---|--|--|
| Observational measures | <p>Data collected through observing the processes or outcomes of instruction; data may be collected on performance of individual participants or instructors, groups of participants or co-workers, instructional context variables, and child or family impact variables</p> | <p>Observational assessments permit evaluations of actual practices rather than relying on self-ratings, knowledge, or attitude measures. Specific barriers related to transfer of instruction can be identified through observational assessments. Observers can provide feedback to the learner in the performance environment. Observations can be made by a variety of people, including supervisors, co-workers, the evaluator, or those affected by the individual's performance. Observations require a large investment of time, and the costs associated with this evaluation strategy must be weighed against the potential benefits.</p> | <ul style="list-style-type: none"> <li>• Behaviors can be counted, timed, or compared with a standard.</li> <li>• Behaviors can be observed over time and circumstances to assess acquisition, generalization, and maintenance.</li> <li>• Observations can be live or based on recorded performance.</li> <li>• Observations can be continuous, time sampled, or momentary.</li> <li>• Recorded performances can be reviewed repeatedly by different observers (e.g., instructors, family members).</li> <li>• Qualitative criteria can be included in the observation system.</li> </ul> | <ul style="list-style-type: none"> <li>• Performance checklists</li> <li>• Environmental rating scales</li> <li>• Child and family observational measures related to participant performance</li> <li>• Critical incident observations</li> <li>• Frequency counts</li> <li>• Duration measures</li> <li>• Observation coding systems</li> </ul> |
|------------------------|---|---|--|--|

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(continued)

**TABLE 6.3.** *(continued)*

| <b>Evaluation strategy</b>  | <b>Description</b>   | <b>Rationale for the strategy</b>  | <b>Options for gathering data</b>   | <b>Formats for data collection</b>   |
|-----------------------------|--|--|---|--|
| Evaluating planned outcomes | Procedures specifically used to document projected versus actual outcomes of staff development | Generating statements of goals or behavioral objectives to be achieved is common practice in staff development. Using these goals or objectives as benchmarks to evaluate outcomes contributes direction to current and future staff development efforts. Evaluating planned outcomes focuses attention on the overall processes and effects of staff development. | <ul style="list-style-type: none"> <li>• If goals and objectives for staff development are set at specific target levels, planned outcomes are evaluated in a binary fashion (e.g., achieved, not achieved).</li> <li>• If goals and objectives for staff development are stated in terms of variable outcome levels, then evaluation of planned change can be documented (e.g., worse than expected outcome, expected outcome, better than expected outcome).</li> </ul> | <ul style="list-style-type: none"> <li>• Record sheets</li> <li>• Goal attainment scaling forms</li> </ul> |

|   |   |   |   |   |
|---|---|---|---|---|
| Measurement of program or community practices | Procedure by which participants or instructors, family members, or other stakeholders provide their perspectives about program or community practices related to staff development activities | Many staff development experiences are designed to affect program or community practices and are not limited to altering knowledge, skills, or efficacy of individuals. Evaluation data focused on collective changes at the agency or community level. These data can provide a contextual perspective and assist with agency- or community-level decision making about staff development. | <ul style="list-style-type: none"> <li>• Agency policies, procedures, and records can be reviewed.</li> <li>• Interrelationships among various community agencies can be analyzed.</li> <li>• Selected representative individuals can be asked to describe program or community practices.</li> <li>• Individuals can observe agency or community teams doing their work.</li> <li>• Selected representative individuals can complete rating scales that quantify program or community characteristics.</li> <li>• Agency or community funding patterns, levels, and cost centers can be analyzed.</li> </ul> | <ul style="list-style-type: none"> <li>• Document analysis</li> <li>• Network analysis</li> <li>• Consensus techniques</li> <li>• Critical incident observations or interviews</li> <li>• Instruments</li> <li>• Focus groups</li> <li>• Community forum</li> </ul> |
|---|---|---|---|---|

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Adapted from Bailey, Geissinger, McWilliam, McWilliam, & Simeonsson (1989).

tant for three reasons: 1) a minimum level of participation may be necessary to justify offering the program, 2) the number of participants in an instructional session can affect its quality, and 3) the extent to which participants are actively involved in the workshop can influence its effectiveness.

**Learner Satisfaction** The most common category of evaluation is learner satisfaction. This category is based on the subjective perspectives of participants about instructional content, instructional processes, instructors, physical facilities, and ancillary factors such as registration procedures, materials, and cost. Satisfaction data can be gathered from all participants or from a representative sample. Data can be obtained at selected points throughout the instructional event or at the end of the session. Instrument or interview methods can be used to gather satisfaction data. A unique approach for collecting satisfaction data is to post three sheets of flipchart paper labeled “What did you like?” “What would you change?” and “What do you want more instruction and information about?” on the wall outside the room where the instruction is taking place. Each participant is given pages from a self-sticking notepad and invited to write comments on the pages and post their responses on the appropriate flipchart page (C. Catlett, personal communication, November 1992).

Although not often discussed, instructor satisfaction data can be obtained using strategies similar to those used with participants. For example, instructors could be asked to evaluate overall satisfaction with their session, including what they might alter in future sessions.

Satisfaction data from participants and instructors may be useful for decision making about alternative formats, locations, and other aspects of personnel preparation. The importance of satisfaction data, however, can be overemphasized. High levels of satisfaction do not guarantee knowledge or skill gains or transfer of skills to practice contexts.

**Change in Learner Knowledge, Skills, and Attitudes** This category of evaluation involves documenting changes in knowledge, skills, or attitudes. Baseline and at least one or more repeated measurements are needed to evaluate change. Table 6.3 shows several methods or strategies that can be used to evaluate knowledge, skills, and attitudes. Staff developers who evaluate knowledge, skills, or attitudes may observe change from pre- to posttest. However, without appropriate experimental controls in place, evaluators cannot necessarily attribute the change directly to the personnel preparation activity. People may change simply because they grow wiser or succumb to peer influences. These and other internal and external validity threats are present in most personnel preparation circumstances. Evaluators should refrain from making unsubstantiated claims about why changes in knowledge, skills, or attitudes occur.

**Application of Learning After the Program** This category of evaluation is concerned with the extent to which the knowledge, skills, and attitudes learned during instruction transfer to practice contexts. A variety of follow-up evaluation strategies are described in Chapter 7. Follow-up evaluation data are central to the personnel preparation process, particularly when the goals of personnel preparation involve transfer of learning.

**Impact of Application of Learning** This category focuses on the evaluation of second-order outcomes. First-order outcomes evaluate impact on individuals who participate directly in the personnel preparation activity (e.g., learners, instructors). For example, in Janet’s story, changes in her knowledge about routines-based intervention is a first-order outcome. Second-order outcomes relate to effects realized by people who do not participate directly in the personnel preparation activity. For example, children and families in the program where Janet works may realize a benefit from her participation in the workshop. Second-order evaluation data are sought actively by staff developers, funders,

and policy makers because these data are believed to offer convincing evidence about the “worth” of personnel preparation programs. In many contexts, the ultimate goal of personnel preparation is to improve services for children and families.

Most of the evaluation formats listed in Table 6.3 could be used to evaluate second-order effects. However, demonstrations of second-order effects do not necessarily offer conclusive evidence that the personnel preparation activity was responsible for the effects. Internal and external validity design threats may limit conclusions that can be drawn about the impact of training. Staff developers should evaluate second-order effects, when appropriate, but they should use caution in attributing them solely to personnel preparation activities.

***Program Characteristics Associated with Outcomes*** This category of evaluation attempts to link workshop implementation and outcome data (Cervero, 1984). This level focuses on explicating relationships between workshop characteristics and outcomes. Questions that might be asked include, “Is there a statistically significant or noteworthy relationship between the amount of instructional time devoted to active instructional methods and participants’ satisfaction ratings?” or “Are levels of participation by individuals during the personnel preparation activity related to skill proficiency in their practice contexts?”

Similar to other categories of evaluation, making definitive statements that imply the existence of direct relationships between program characteristics and program outcomes may be problematic. However, as Cervero (1984) noted, “The alternative is to use the workshop title as the explanatory variable. . . . It seems obvious that some information is better than none, as long as we recognize the limitations of the data” (p. 65).

Beyond the strategies listed in Table 6.3 and previously discussed, many of the same data collection methods and strategies listed in Table 6.1 for gathering needs assessment information are recommended for use in evaluation. Caffarella (1994) noted that this overlap is not unexpected because needs assessment information often serves as baseline data for evaluations that occur during or after the instruction.

### **Use of the Strategies in Early Intervention Personnel Preparation Efforts**

Janet’s story and two vignettes are used to examine how Cervero’s (1984) framework and strategies presented in Table 6.3 could guide program evaluation efforts. In Vignette 1, the goals for instruction included demonstrating that primary referral sources receive awareness-level instruction about the early intervention program and increasing participants’ knowledge about the early intervention systems and the responsibilities of primary referral sources. Evaluation data must include documentation of the numbers of participants, their disciplines, and the agencies they represent. Participants’ knowledge acquisition also must be evaluated. Personnel from the UAP could provide the lead agency with formative data, specifying how instruction was planned, implemented, and modified based on feedback from participants.

The personnel preparation plan specified in Vignette 2 includes attention to obtaining multilevel process and impact data that document achievement of a desired outcome. The goal is to have all teachers learn about and use ABI in their classrooms. If this goal is achieved, then effects on teachers, children, families, and the agency as a whole would be expected. Each category specified in Table 6.3 could become part of a comprehensive evaluation plan. Decisions about which specific evaluation strategies to use should be made after team members consider their major goals for the personnel preparation efforts over time, the resources and climate in the agency, and the expertise available to them from university personnel.

In Janet's story, two types of evaluation data were gathered: satisfaction and knowledge. Although these were matched to the goals of instruction, how meaningful were these data for Janet? She wanted to learn about routines-based intervention and integrated therapy so she could apply it in the work setting. Without program implementation and follow-up evaluation data, the instructors will never know the extent to which their efforts affected Janet's performance in the work setting.

### Deciding on a Strategy

Decisions about specific evaluation strategies should be based on availability of data, relevance of data to personnel preparation goals, reliability of the data source, availability of methods to collect data, degree to which data collection methods intrude, trade-offs between effort expended and information yielded, and resources available for use (Walsh & Green, 1982). Additional criteria that early intervention staff developers can use to guide evaluation decisions can be found in Grotelueschen (1986) and Knox (1986).

### Challenges in Evaluation

As staff developers plan for and implement evaluation, they face a variety of challenges. These challenges include specifying the focus of the evaluation, ensuring that evaluation corresponds to the intended outcomes of personnel preparation, evaluating informal or unplanned outcomes, planning evaluation so results are used, securing resources, using measures that produce reliable and valid data when used with various samples of participants, considering ethical and practical constraints on evaluation, and recognizing the role values and preferences play in the evaluation process. These challenges are described, and potential options to address them are offered.

**How Is the Focus of the Evaluation Specified?** Evaluators can focus their efforts on program elements such as the instructor, participant, topic, and context. They also can evaluate program characteristics, including goals, design, implementation, and outcomes. Specific evaluation models, such as Stufflebeam's Context, Input, Process, and Product (CIPP) model (1973), can frame evaluation efforts. A review by Cervero (1984) reinforced the conclusion that there is no shortage of evaluation models available to guide program evaluation efforts. He found more than 40 formal evaluation models represented in the published literature. The challenge most staff developers face is how to specify a focus given the many possible directions evaluation can take. Becker, McCarthy, and Kirkhart (1992) suggested that five basic questions (see Table 6.4) be asked when deciding on a

**TABLE 6.4.** Criteria for deciding what to evaluate

- 
- **What's worth knowing?** In other words, what information can be used to guide and evaluate personnel preparation efforts?
  - **Who wants to know?** Some evaluation questions are worth asking because they are important to certain key stakeholders or funders.
  - **What are the most important program goals?** State the goals and objectives for the personnel preparation effort, and identify the most important ones. This may provide a logical starting place for planning evaluation activities.
  - **What is the program's stage of development?** Certain evaluation questions may be more critical at one point than at another in the personnel preparation process.
  - **What is feasible to evaluate?** Some questions require more resources, time, and expertise than others. Some questions cannot be investigated due to ethical considerations or the undue burden placed on learners, instructors, or consumers of services.
- 

Adapted from Becker et al. (1992).

focus for the evaluation: 1) What's worth knowing? 2) Who wants to know? 3) What are the most important program goals? 4) What is the program's stage of development? and 5) What is feasible to evaluate?

**How Should Evaluation Correspond to the Intended Outcomes of the Personnel Preparation Effort?** Personnel preparation efforts can be characterized by a variety of purposes or intended outcomes. These include increasing participant knowledge, modifying attitudes, or changing practices. Evaluation strategies should correspond to these desired outcomes. If personnel preparation is intended to change participants' performance in the workplace, a primary evaluation focus should be on application of learning after the instructional event. Evaluation of knowledge acquisition would correspond to a stated purpose of increasing participants' knowledge about a particular topic. Different types of evaluation are better than others only to the extent that they correspond to the intended outcome of the personnel preparation effort (Cervero, 1984).

**How Are Informal or Unplanned Outcomes Evaluated?** Personnel preparation efforts can be expected to produce informal or unplanned outcomes. The evaluation plan should be structured so that side effects and opportunity costs, as well as intended outcomes, are measured. Informal or unplanned outcome evaluation opportunities arise, for example, when instructors notice that participants either remain in the instructional session or make a decision to go shopping instead. This is a powerful type of participation data that might not be captured in a formal evaluation plan. Informal or unplanned evaluation might occur during the lunch break when instructors meet with three participants to get their reactions to the morning session. This type of learner satisfaction data, obtained during the instructional event, could alter the remainder of the program.

**How Can Evaluation Be Planned So Results Are Used for Decision Making?** Program planners might devote time and resources to developing and implementing a model evaluation plan only to find the data not used for current or future decision making. To increase the likelihood of use, Cervero (1984) advised staff developers to determine who would use the information and what kind of information they would need. He recommended that these people be involved, as much as possible, in the evaluation design, implementation, analysis, and reporting. Information users might include participants, program planners, instructors, those who finance the personnel preparation activity, and administrators. These users might have different evaluation needs. Satisfaction data, for example, might be important to the instructor, whereas administrators might be interested in application outcomes. Each of these users and their needs may need to be addressed in the evaluation plan. The constraints of monetary and human resources also must be considered with the needs of these users.

**How Important Are Resources for Evaluation?** Resources should be assessed continually while the evaluation plan is being formulated. Resources include available money, time, expertise, and contextual factors to support evaluation efforts (e.g., instructor who is willing to devote part of a workshop session to administering pre- and postknowledge assessments). Quality evaluation is time consuming, labor intensive, and expensive. As resource availability usually is limited, staff developers in early intervention can no longer justify single source, method, or domain evaluations. Some form of multisource, multidomain, and multimethod evaluation must appear in every program evaluation effort, and efforts must be made to secure the resources to perform these types of evaluations.

**How Important to the Evaluation Process Are Measures that Produce Reliable and Valid Data?** Measures used to gather evaluation data from instructional participants must produce reliable and valid data. Reliability and validity, however, are not static properties of a measure. Reported indexes of reliability and validity relate to data obtained

from samples of participants in specific instructional contexts. These indexes may fluctuate from one evaluation context to another. For example, estimates of internal consistency reliability for an instrument that purports to operationalize attitudes toward family-centered early intervention may change across evaluation contexts when different samples of interventionists complete the measure. Evaluators should examine the reliability and validity of the instruments they select for program evaluation efforts using data gathered from participants in their program. These analyses provide the evaluator with important information about how the instrument performed in a particular evaluation context and whether substantive evaluation questions can be asked and answered with confidence (see Snyder, Lawson, Thompson, Stricklin, & Sexton, 1993).

***How Do Ethical and Practical Constraints Affect Evaluation?*** Many of the same ethical considerations used to guide organized research activities apply in the evaluation context. For example, individuals cannot be forced to participate in evaluation activities. Evaluators must ensure that the privacy of participants is protected when reporting results. Evaluation data obtained from participants should not be used to make hiring or retention decisions. These and other ethical considerations present constraints on evaluation that staff developers must consider. Practical constraints also affect evaluation efforts; for example, it may not be feasible for participants to be observed by instructors in the workplace. The practicality of having people with limited reading proficiency complete written surveys should be questioned. Staff developers should make every effort to identify ethical and practical constraints during the formulation of evaluation plans.

***How Can the Roles of Values and Preferences Be Considered?*** The evaluation process involves application of judgment. An individual or group makes value-based judgments during each phase of the evaluation process. Decisions are filtered through and influenced by the perspectives of individuals responsible for developing the evaluation plan. For example, an evaluator may prefer certain instruments because the measures have yielded reliable and valid data when administered to samples of early interventionists. Values and preferences should be acknowledged explicitly so that everyone involved in the evaluation process is aware of their influence (Cervero, 1984).

### **Summary of Evaluation Issues**

The evaluation plans described in Vignette 1 and in Janet's story are too common in early intervention. More extensive evaluation data should be gathered and used in personnel preparation efforts. Bailey (1989) stated that these data are desperately needed. Without data to document the impact or worth of personnel preparation, these efforts will continue to be characterized as "irrelevant and ineffective, a waste of time and money" (Wood & Thompson, 1980, p. 374). Bailey urged early intervention personnel instructors to conduct evaluations that focus on the process of personnel preparation and on the various outcome domains (described in Table 6.3), including participant satisfaction, change in participant behavior and attitudes, and, ultimately, benefits for children and families served by individuals who participate in personnel preparation.

There are many challenges that staff developers face as they attempt to design and implement comprehensive and meaningful evaluation. Although these difficulties can appear overwhelming, evaluation efforts in early intervention must move beyond participant satisfaction and knowledge acquisition.

### **CONCLUSION**

This chapter has presented concrete strategies and decision-making guidelines that could be used to enhance the quality of needs assessment and evaluation efforts in early inter-

vention and has raised challenges associated with these two personnel preparation components. Chapter 7 addresses follow-up, a third critical component of personnel preparation efforts, and concludes with several important guidelines for linking needs assessment, follow-up, and evaluation in early intervention.

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