21 PUTTING IT ALL TOGETHER

The Nuts and Bolts of Personnel Preparation

Camille Catlett
Pamela J. Winton

Each time learners and instructors or trainers interact, there is a precious opportunity to exchange ideas in a manner that will lead to positive and desired learning outcomes for both parties. The first 20 chapters of this book discuss the many decisions to be made about how to structure these learning opportunities from a variety of perspectives, ranging from broad systemic perspectives (Chapters 1–4) to specific models. The challenge for those responsible for planning and facilitating learning is how to select from among the possibilities to create sequences with the greatest possibility of creating desired changes.

This chapter addresses the challenges of ''putting it all together'' by focusing on three topics: 1) how to make good decisions about specific instructional approaches (i.e., methods and materials), 2) how to plan for the inevitable challenges that confound learning opportunities, and 3) how to use two checklists to assist with designing instructional sequences.

MAKING DECISIONS ABOUT INSTRUCTIONAL APPROACHES

Within the broader framework of content and process discussed in Chapter 5, effective instruction occurs when effective presenters use effective approaches that achieve desired learning and facilitate desired changes in practice. Wolfe's research (1992) summarized the characteristics of effective presenters as individuals who are well prepared, knowledgeable, and enthusiastic; who provide opportunities for hands-on experience; and who use a variety of techniques. From her work, we also know that effective presentations are those that are enjoyable as they provide a chance to grow, meet learner needs, and present practical content.

One area that must be considered in making decisions about what is taught is the diversity of learners. Learner diversity can be conceptualized in terms of cultural diversity (see Chapter 9), participant diversity (i.e., family members, providers representing multiple disciplines, administrators; see Chapters 5 and 20), and learner style diversity (Brookfield, 1990a; Kolb, 1985; Mezirow, 1991; Wolfe, 1993). The challenge for instructors is to use methods and materials that engage and support learning by individuals with different levels of knowledge in a manner that enables all learners to contribute and learn from each other.

Brookfield (1986) said that ''the principle of diversity should be engraved on every teacher's heart'' (p. 69). One of the best predictors of the merit of an instructional approach

is diversity. Are a range of approaches being used to present content that diverse learners can relate to? Are multiple input channels being tapped (i.e., visual, auditory, oral, written)? Are opportunities for independent and group learning being alternated? Are lectures interspersed with more interactive techniques, such as role plays and simulations? Is time allowed for reflection and absorption of material? Prioritizing diversity of approaches to instruction serves two important purposes. First, it increases the likelihood that the content will be conveyed in the preferred learning style of most learners at some point in the instruction. Second, it introduces participants to learning modes and orientations that are new to them. Exposing learners to a variety of instructional techniques increases the likelihood that they will be successful in a variety of future learning experiences (Brookfield, 1990a). Brookfield referred to this second benefit as assisting learners to learn-how-to-learn, which is further defined by Smith (1982) as "possessing or acquiring the knowledge and skill to learn effectively in whatever learning situation one encounters" (p. 204).

In Chapter 5, McCollum and Catlett raised another important consideration in instructional design: how to match instructional approaches to desired learning outcomes expressed in terms of complexity of application, thus illustrating that instructors can select different methods and materials to achieve different levels of learning impact (e.g., awareness, knowledge, skill, attitudes/values). Table 21.1 shows how the concept of matching methods and materials with desired levels of impact applies at a more practical level and presents a description of approaches appropriate at each level of desired impact, along with examples from this book and resources for additional reading or information. Figure 21.1 and Table 21.1 in combination illustrate the importance of paying careful attention to selecting and sequencing instructional approaches; linking didactic forms to practical, field, or follow-up experiences; and balancing passive experiences with those that require more active participant involvement (Hanson & Brekken, 1991; Klein & Campbell, 1990).

At this point, it seems fitting to say a few words about lecture. Lecture has been described as the "most frequently abused" method of teaching (Brookfield, 1990a, p. 71). For many instructors it is the most familiar, and often most comfortable, vehicle for
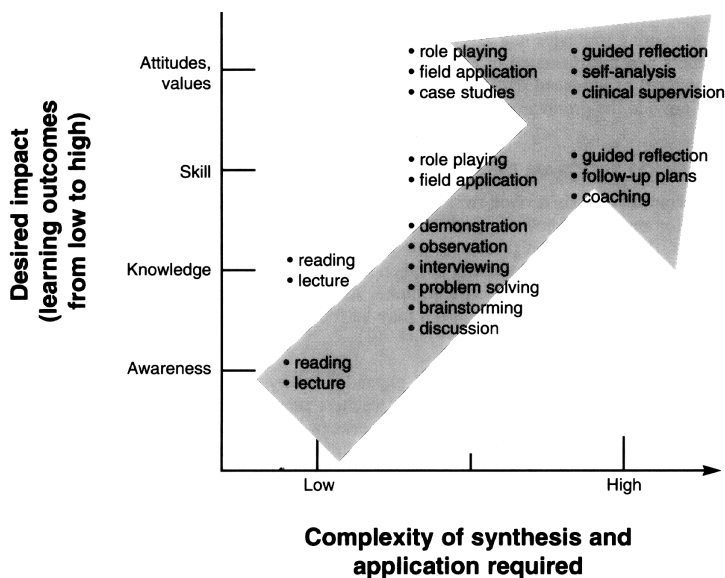
Figure 21.1.   A model for matching training approach to desired training outcomes and complexity of application. (Adapted from Harris [1980].)

TABLE 21.1. Options for matching instructional approaches to desired learning outcomes

	Description	Examples in this book	Resources
Awareness-level approaches			
Environmental scan	Learners collect data (e.g., articles, pictures, personal comments, accounts) about trends and events that may affect a program, organization, or process to get a sense of the "big picture." A strategy for understanding the context for policy development.	Chapter 16, pp. 415–419	Bergman, 1995
Games	Learners play games that are constructed to address learning objectives. Can be used as icebreakers, for a change of pace, to illustrate material, for a fun way to review information, to liven up a session, or to add an element of friendly competition.	Chapter 10, p. 261 Chapter 14, p. 371 Chapter 15, p. 404 Chapter 16, pp. 416, 421	Eitington, 1989; Saunders & Hawkins, 1986
Guest presenters/ panel presentations	One or more subject matter experts participate to present their viewpoints, answer questions, or discuss issues.	Chapter 10, p. 261 Chapter 11, p. 286 Chapter 12, pp. 314, 320, 323 Chapter 16, pp. 416, 421, 427–428	Meyers & Jones, 1993; Saunders & Hawkins, 1986
Lecture/lecturette	A formal discourse in which a subject matter expert develops and delivers a presentation that conveys information related to the learning objectives. Lectures can be combined with other methods to avoid learner inactivity.	Chapter 14, p. 371	Brookfield, 1990a, 1990b; Eitington, 1989; Meyers & Jones, 1993
Models	A diagram or graphic representation gives learners a way of looking at a lot of information (i.e., the big picture) at one time. In training, models can provide a framework against which learners can test the validity of their attitudes, values, assumptions, and behaviors.	Chapter 14, Activity 3 Chapter 15, pp. 399–400	Eitington, 1989

TABLE 21.1. (*continued*)

	Description	Examples in this book	Resources
Awareness-level approaches *continued*			
Readings	Written material to provide learners with additional information or insights. Can include articles, books or stories written by consumers, children's books, and so forth.	Chapter 9, Activity 1.2 Chapter 10, pp. 258–260 Chapter 12, pp. 318, 323, 389 Chapter 16, Tables 16.2, 16.4, 16.5	Meyers & Jones, 1993
Videotapes	Provide opportunities for participants to see actions or messages within a context. Most effective when followed by discussion, role play, or other activity to draw out and develop key concepts. Can be especially useful with audiences with limited literacy skills.	Chapter 10, pp. 261, 264, 268–269 Chapter 12, pp. 313–314, 328–329 Chapter 15, pp. 399, 402 Chapter 16, p. 424	Eitington, 1989
Knowledge-level approaches			
Brainstorming/ brainwriting	Individuals or groups generate ideas on a given theme or problem. Often uses the principles of deferring judgment, quantity breeds quality, the wilder the idea the better, and combine and improve ideas. Variation: Backward brainstorming presents a problem situation and a solution, and learners generate ideas of how the problems were solved.	Chapter 12, p. 325 Chapter 14, Activity 1, 3	Eitington, 1989
Debates	Individuals or groups choose, or are assigned, positions relative to a controversial topic. Given time to prepare, they present arguments and debate positions. Variation: At a certain point in the debate, each side is asked to reverse positions and resume the debate.	Chapter 11, p. 287 Chapter 13, Activity 2 Chapter 16, p. 416	Eitington, 1989

Demonstrations	Learners are shown and told how something works or how to do something. Usually followed by giving the learners the opportunity to try or practice the skill with coaching and feedback.	Chapter 8 provides information on effective coaching and feedback practices, pp. 201–209	Sullivan, Wircenski, Arnold, & Sarkees, 1990
Group exercises/ discussions	Small groups of learners assemble to cooperatively complete a task or process or to discuss a given topic. Groups then reconvene in the larger group to report, compare results, and articulate what has been learned from the exercise.	Chapter 9, Activity 1.2, 1.3, 2.1, 2.2, 2.3, 3.1 Chapter 12, pp. 314–315, 328 Chapter 13, Activity 3, 5, 9 Chapter 14, Activity 6, 7 Chapter 15, pp. 403–404	Brookfield, 1990a; Meyers & Jones, 1993; Saunders & Hawkins, 1986
Individual exercises/ independent study	Learners spend time individually to complete a task, develop plans, develop a position, brainstorm, or reflect on the information and their response. Often followed up with small- or large-group discussion or other activity.	Chapter 11, pp. 281, 286–287 Chapter 14, Activity 8	Brookfield, 1986
Lecture/readings	See Awareness-level approaches above.		
Problem solving	A problem is identified, and an appropriate structured problem-solving method is introduced. Individuals or groups are given the opportunity to solve the problem.	Chapter 10, pp. 267, 269–271 Chapter 11, Activity 3 Chapter 14, Activity 2	Eitington, 1989
Process mapping/ process studies/ flowcharts	To clarify, understand, or improve procedures or protocol, the sequence of operations and key elements, images, or decisions is mapped out and reviewed or analyzed.	Chapter 9, Activity 1.1, 3.3 Chapter 10, pp. 261–263 Chapter 11, Activity 2	Deshler, 1990
Projects	Learners are given projects to complete that require understanding and application of the principles, skills, knowledge, or attitudes related to the topic. Projects can be presented for in-session use or for homework.	Chapter 14, Activity 4 Chapter 16, pp. 416, 424	Meyers & Jones, 1993

TABLE 21.1. *(continued)*

	Description	Examples in this book	Resources
Knowledge-level approaches *continued*			
Simulations	An environment is created that models a real or anticipated situation. Combine this method with others listed in this section for introducing or practicing new material or troubleshooting around situations.	Chapter 11, p. 286 Chapter 12, pp. 318–319 Chapter 16, p. 427	Brookfield, 1990a; Meyers & Jones, 1993
Storytelling/personal incidents and perspectives	Learners share concrete experiences related to the instructional topic. Stories help provide a personal connection to the material and help learners clarify their interest, values, opinions, and stake in the topic. Listeners have the opportunity to reflect on diverse experiences.	Chapter 10, p. 260 Chapter 14, Activity 5 Chapter 16, pp. 421, 425, 427	Brookfield, 1990b
Task analysis	Individuals, small groups, or large groups break down the sequential process of a technique or procedure to understand the subtleties and interrelatedness of all the components.	Chapter 13, Activity 4, 11	Saunders & Hawkins, 1986
Write to learn/guided reflection	Writers are given a provocative theme/question/problem/task and asked to write their thoughts before the group deals with the topic verbally. This technique helps learners get in touch with current knowledge and advance their learning more confidently.	Chapter 11, Activity 4 Chapter 13, Activity 1, 3 Chapter 16, p. 428	Hile, 1992
Skill-level approaches			
Coaching	Structured relationships for receiving support and encouragement through opportunities to review experiences, discuss feelings, describe frustrations, and check perceptions with a partner. Often a pairing of an experienced individual with a less-experienced individual.	Chapter 7, pp. 179–182 Chapter 8, pp. 201–209 Both chapters provide information on effective coaching practices	Chapters 7 and 8; Saunders & Hawkins, 1986

Field-based experiences/field applications/practica	Learners leave the structured environment of a classroom for a real-world opportunity to observe, try new things, search for information, interview people, and so forth. Specialized applications include family practica, interdisciplinary practica, and policy development practica.	Chapter 11, Appendix B Chapter 15, p. 399 Chapter 16, p. 427 Chapter 17, pp. 447–448 Chapter 18	Chapters 17 and 18; Fenichel, 1992
Follow-up plans	Specific participant-designed strategies for applying what they learned as a result of attending an educational program. Plans include a mechanism for monitoring progress in implementing plans.	Chapter 7	Chapter 7; Wolfe, 1992
Journal writing/diaries/self-reflection	Individuals write entries in a personal journal or diary as a supplement to readings and lecture. Can help participants acquire insight about their behavior, motivations, values, attitudes, and feelings. Can provide insight for instructors into impact and effectiveness of instruction.	Chapter 8, p. 208	Brookfield, 1990a, b; Lukinsky, 1990
Role playing	Situations that typify real-world experiences are presented by learners acting out assigned roles. Variations: Watch a story (videotape) that dramatizes a situation and reenact the interaction differently; carry out multiple role plays with smaller groups going on at the same time; ask players to reverse roles; let more than one learner play any given character; or use scripted role play (see below)	Chapter 11, pp. 286–287, 299 Chapter 12, Activity 1, 2 Chapter 16, p. 425	Brookfield, 1990a; Eitington, 1989;
Scripted role playing	The ''story'' is reenacted by participants who assume the roles of characters in a situation and read from previously developed scripts. The entire group then discusses, analyzes, and problem-solves the situation that was presented. Variations: Small groups develop and present scripted role plays in the session; scripts might include the revelation of characters' thoughts as well as dialogue.	Chapter 11, Activity 1	Eitington, 1989

(continued)

TABLE 21.1. (*continued*)

	Description	Examples in this book	Resources
Skill-level approaches *continued*			
Self-assessment/self-analysis	Structured instruments (e.g., checklist, questions, rating scale) can be used to facilitate self-examination of attitudes/practices, followed by identification of needed/desired changes. Readministration can be used to measure progress in making targeted changes.	Chapter 10, p. 266 Chapter 11, p. 286 Chapter 12, pp. 315, 317–318 Chapter 15, p. 400	Mezirow, 1991; Saunders & Hawkins, 1986
Write to learn/guided reflection	See Knowledge-level approaches on pages 530–532.		
Attitude/value-level approaches			
Case method of instruction	Real-life situations are presented from which a group analyzes issues, applies knowledge, makes decisions, solves problems, and empathizes with the experiences of others. Also known as case studies or situation studies. Can be presented on audiotape, videotape, in writing, or live.	Chapter 10, pp. 266–267, 271 Chapter 11, p. 287 Chapter 13, Activity 7	Eitington, 1989; McWilliam, 1992; McWilliam & Bailey, 1993
Clinical supervision	The process of an experienced individual or individuals directing or guiding less-experienced individuals to accomplish clinical practice-related goals. Involves defining job requirements, counseling for improved performance, providing instruction, evaluating work, and providing feedback.	Chapter 8 provides information on effective supervision, pp. 192–196	Chapter 8; Fenichel, 1992
Field-based experiences/field applications/practica	See Skill-level approaches above		
Write to learn/guided reflection	See Skill-level approaches on pages 532–533		
Role playing	See Skill-level approaches on pages 532–533		
Scripted role playing	See Skill-level approaches on pages 532–533		
Self-assessment/self-analysis	See Skill-level approaches on pages 532–533		

Based on Edelman, L. (1995). *Learning styles, training activities, problem solving activities, and the role of training and learning.* Workshop presented at the NEC*TAS Conference on Adult Learning and Evaluation of Training and Technical Assistance, San Deigo, CA.

conveying content. But with retention rates from material delivered by lecture as low as 5% (as opposed to 50% retention from group discussion or 90% retention from teaching others), instructors need to be quite clear about why they are choosing lecture at any particular time (Parent Educational Advocacy Training Center, 1990). Most adult learners have an average attention span of 15–20 minutes, and the greatest amount of comprehension and retention occurs during the first 5 minutes (Middendorf & Kalish, 1996). Good lectures can be an efficient way to deliver specific content but need to be used judiciously. In Brookfield's (1990a) chapter entitled ''Lecturing Creatively,'' he suggested some common reasons for selecting lecture as a preservice instructional strategy, including establishing the broad outlines of a body of material, setting guidelines for independent study, modeling intellectual attitudes for students, encouraging learners' interest in a topic, and setting the moral culture for discussions. For preservice or inservice instruction, variety may be the key to using lecture as an effective strategy. Middendorf and Kalish (1996) suggested a dozen ''change-up'' options, that is, instructional strategies with which to follow lecture. These include such diverse options as asking participants to write exam questions about the lecture material that was covered; posing a question about the covered content that requires analysis and synthesis, then asking learners to write and share and compare answers; and dividing participants and structuring a debate of opposing sides of an issue.

Another consideration in putting it all together is selecting instructional approaches that support desired changes on the part of participants, as illustrated in Chapter 5. Winton (1990) described this as a priority for ''establishing within the [participants] the capacity to generalize skills learned . . . to refine those skills continually over time, and to teach those skills to others'' (p. 56).

Specific instructional strategies can support learners in making those changes. One way is by providing instructional materials that will assist in promoting skill development and application (e.g., clear handouts, copies of relevant articles, topical reading lists, annotated bibliographies, clean copies of materials used during training that participants can copy for use). A second approach to promoting the use of new ideas is assisting participants to find material and organizational resources for ongoing use, such as libraries, special collections, electronic networks, or parent organizations. A third strategy is to employ instructional methods that give participants opportunities to practice new approaches (e.g., interdisciplinary participants working as small groups on decision making to promote effective teamwork; role plays that enable participants to ''practice'' skills such as interviewing or sharing diagnostic information; participating in interdisciplinary practica; participating in a mentoring relationship). The process of promoting and supporting change in early intervention personnel preparation is not easy (Winton, 1990), but individual instructors have the opportunity to make significant contributions by how they plan and implement their interactions with learners.

PLANNING FOR THE INEVITABLE
CHALLENGES THAT CONFOUND TEACHING AND TRAINING

Effective instructors who are asked to teach specific classes or workshops are capable of adapting to different responses and situations. However, even the best-prepared instructors are frequently stymied by elements beyond their control. Four common instructional challenges are lack of instructional resources, lack of fiscal resources, lack of human resources, and unanticipated variables that require instructor flexibility. Table 21.2 lists some effective strategies for addressing these challenges.

TABLE 21.2.   Strategies for addressing common instructional challenges

Challenge	Strategies
Lack of instructional resources	
• Lack of resources to buy instructional materials	• Locate resources for high-quality, low-cost instructional materials. The *Resource Guide: Selected Early Childhood/Early Intervention Training Materials* (Catlett & Winton, 1996) (see Resources at the end of this chapter) lists many quality items that are readily available and inexpensive or free.
	• Explore state and local organization, parent group, and professional association resource libraries for possible materials to borrow. For example, PACER Center, a family center in Minneapolis, lends many of its videotapes for $10.
Lack of human resources	
• Lack of family members with whom to copresent	• Contact parent organizations to identify family members who may be interested.
	• Ask family members in leadership roles (e.g., interagency coordinating committees, state agency) if they would be interested or know of others who would be.
	• Contact local preschool or infant/toddler program administrators or teachers regarding family members who might be interested in personnel preparation.
• Lack of copresenters from other disciplines	• Develop partnerships with service providers from diverse disciplines and service delivery settings (e.g., home based, center based) in the community. Additional benefits for preservice audiences is that this models "tower–trench" collaboration. For inservice audiences this can underscore and reinforce the value of firsthand experiences such as their own.
Lack of fiscal resources	
• Lack of resources to support family participation	• Advocate for support from the source supporting the personnel preparation activity to include this in the budget
	• Contact organizations for families or children with special needs for possible funding for family participation.
	• Organize volunteers to support families by providing child care. At one annual early intervention conference in West Virginia, local child care providers volunteered to provide free child care to the children of participating families.
	• McBride, Sharp, Hains, and Whitehead (1995) identified a list of internal and external sources for funding parent coinstruction in higher education.

TABLE 21.2.   (*continued*)

Challenge	Strategies
Unanticipated variables that require instructor flexibility	
• Participants are different than you expected (e.g., more sophisticated, less sophisticated, more diverse)	• Overprepare. Always prepare more activities, more examples, and more content than you can use. This will enable you to select from among possibilities in finding the best match with audience expectations and targeted outcomes.
	• If needs assessment data are not available, start with an informal needs assessment (e.g., discipline representatives? family members? administrators? settings? previous instruction or experience? expectations?). This will enable you to target content and examples to the audience.
	• Monitor the "pulse" of the participants. One way is to provide participants with Post-it notes and a feedback sheet on which they can tell you what they like and what they would change. This information can then guide any "midcourse corrections."
• Asked at the last minute to teach a class/course or provide inservice instruction	• Advocate for greater advance planning time to build in more quality features (especially interdisciplinary, team, family, and/or administrator participation).
	• Know where human resources are that can be drawn on quickly. Contact individuals who have taught similar content for ideas.
	• Know where instructional resources are and work to continuously expand your repertoire.
	• Organize materials so they can be easily located (e.g., keep three-ring binders of overheads or handouts that are indexed by topic).
	• Think like an instructor at all times. As you read an article that has a clear schematic for a particular concept, think "great overhead" or "great handout" and make a copy, with source citation, for future use.
	• Collect ideas for instructional techniques and materials at classes and workshops. By watching the process other instructors use, you'll develop an expanding repertoire of options for meeting diverse learner needs.
• Instructional design elements out of instructor control (e.g., one-shot workshop instead of a sequence of instructional interactions; lack of support for follow-up of students or participants)	• Advocate for quality features, and work to make them part of the instruction you provide.
	• Share the quality indicators with personnel preparation funders and/or planners to help them appreciate the importance and benefits of these features.
	• Share information about the importance of the quality indicators in providing instruction that will produce needed changes in knowledge and application. Winton's (1990) article has good information to support this message.

By necessity, each instructor comes prepared with preconceived objectives and expectations for each learning experience and its participants. Being prepared and organized are characteristics of effective instructors (Wolfe, 1992). But as discrepancies are noted between ''the preconceptions and the realities'' (Saunders & Hawkins, 1986, p. 27), flexible instructors work to diagnose the problems and make necessary changes in format, content, or delivery to meet the needs of the learners and successfully accomplish their goals. This requires creating a climate of respect and communication that will promote participant feedback and foster flexibility, thus assisting instructors in adapting to meet the needs of their audience.

It seems reasonable to presume that instructional flexibility develops as a function of experience. However, many of the strategies illustrated in Table 21.2 can be used by both new and seasoned instructors. Another message from Table 21.2 is the need to advocate for ''quality'' features (e.g., interdisciplinary participation, family and administrative participation) as part of the planning and support for training. The next section offers ideas for assisting instructors in looking at the big picture and designing instruction that includes the many components necessary for promoting productive change in early intervention personnel preparation.

USING CHECKLISTS TO ASSIST WITH DESIGNING INSTRUCTIONAL SEQUENCES

Trying to integrate big picture issues, such as each state's comprehensive system of personnel development (CSPD), and specific design features, such as instructional strategies or evaluation and follow-up, is a challenge for all personnel developers. With time and practice, many instructors become more proficient, constantly working to adjust their repertoire to reflect information on recommended practices and ecosystemic issues. However, it would be helpful to have one list of the key issues to work through when planning instruction.

As part of the Southeastern Institute for Faculty Training (SIFT), Winton (1996) conducted a review of early intervention personnel preparation research to discover what the literature had to say about practices that were most effective. The findings of that review are contained in an unpublished brochure (Winton, 1993) entitled *What We Have Learned About Part H Personnel Preparation,* which summarizes findings from 11 key sources (Bailey, Buysse, Edmondson, & Smith, 1992; Bailey, McWilliam, & Winton, 1992; Bailey, Simeonsson, Yoder, & Huntington, 1990; Bruder, Klosowski, & Daguio, 1989; Gallagher, 1993; Moore, 1988; Rooney, Gallagher, & Fullagar, 1993; Rooney, Gallagher, Fullagar, Eckland, & Huntington, 1992; Winton, 1990; Winton, McWilliam, Harrison, Owens, & Bailey, 1992; Wolfe, 1993). From those findings, two checklists were developed—Preservice Personnel Preparation Quality Indicators (see Table 21.3) and Inservice Personnel Preparation Quality Indicators (see Table 21.4)—to assist instructors in making decisions that are consistent with research findings. The right column of each table indicates a source in this book for information about each quality indicator, including why it is important and how to address it as a component of personnel preparation.

Designing and implementing instruction that supports learner diversity in all its forms and reflects the quality indicators of effective preservice and inservice personnel preparation is no easy task. An evaluation study conducted as part of SIFT revealed that some areas were particularly challenging (Winton, 1996). One component of SIFT was a 4-day institute designed to support the efforts of interdisciplinary groups of early intervention faculty, professionals, and families ($n = 192$) from 15 states in providing quality inservice personnel preparation in their respective states. The principles reflected in the checklist in

TABLE 21.3.   Preservice personnel preparation quality indicators

Indicator	Source(s) for more information in this book
• To what extent was the instruction you provided coordinated with your state's CSPD plan?	Chapters 2–3, 6
• To what extent were certification or licensure credits available to students who participated in the instruction you provided?	Chapters 2–4
• In providing this instruction, to what extent did you work as part of an interdisciplinary instructor team?	Chapters 4, 18, 20
• To what extent did family members of children with disabilities (consumers of services) participate as part of the instructor team?	Chapters 17, 20
• To what extent was the audience interdisciplinary (at least three or more disciplines were well represented)?	Chapters 4, 18
• To what extent were experiential activities and modeling/demonstration opportunities provided as part of the instruction?	Chapters 5, 9–17, 21
• To what extent were instructional strategies used for embedding/applying the specific ideas/practices to the workplace?	Chapters 5, 7, 21
• To what extent were instructional strategies varied and sequenced in ways to support students with different learning needs and styles?	Chapters 5, 19, 21
• To what extent did students identify specific ideas/practices that they desired to try in their clinical experiences (an action plan)?	Chapter 7
• To what extent was ongoing support, monitoring, or technical assistance provided to students after the course or program ended?	Chapters 7–8
• To what extent was actual impact of instruction on practices measured or evaluated?	Chapters 6–7
• To what extent was instruction individualized according to the needs of students?	Chapters 5, 21

Adapted from Winton (1993).

Table 21.4 were emphasized throughout that event and the statewide planning that preceded it. At the end of the 4 days, the participants were asked to rate the extent to which they had incorporated each of the quality indicators into the inservice session they had provided to others during the past 6 months, using a 5-point Likert-type scale. This was considered to be a pretest measure of the quality of the inservice instruction they had provided. They were asked to respond to the same rating scale 6 months after the 4-day institute; this was the posttest measure of quality used in the study. A statistical analysis that compared their responses at these two points in time provided information about the extent to which they were able to implement the quality indicators promoted through SIFT.

The results of this comparison indicated that participants were able to make changes in the implementation aspects of personnel preparation, as reflected in statistically signif-

TABLE 21.4. Inservice personnel preparation quality indicators

Indicator	Source(s) for more information in this book
• To what extent was the instruction you provided coordinated with your state's CSPD plan?	Chapters 2–3
• To what extent were certification or licensure credits available to individuals who participated in the instruction you provided?	Chapters 2–4
• In providing this instruction, to what extent did you work as part of an interdisciplinary instructor team?	Chapter 20
• To what extent did family members of children with disabilities (consumers of services) participate as part of the instructor team?	Chapters 17, 20
• In terms of the target audience, to what extent was the instruction "team based" (included key professionals who work together on a team)?	Chapter 20
• To what extent was the audience interdisciplinary (at least three or more disciplines were well represented)?	Chapters 18, 20
• To what extent were family members involved as participants?	Chapters 17, 20
• To what extent was the instruction actively endorsed by administrators?	Chapters 3, 8, 20
• To what extent was the instruction actively attended by administrators?	Chapter 20
• To what extent were experiential activities and modeling/demonstration opportunities provided as part of the instruction?	Chapters 5, 9–18, 21
• To what extent were instructional strategies used for embedding/applying new ideas/practices to the workplace?	Chapters 3, 5, 21
• To what extent were instructional strategies varied and sequenced in ways to support different learning needs and styles?	Chapters 3, 5, 19, 21
• To what extent did participants identify specific ideas/practices that they desired to try in the workplace (an action plan)?	Chapters 3, 7
• To what extent was ongoing support, monitoring, or technical assistance provided to participants?	Chapters 7–8
• To what extent was actual impact of instruction on practices measured or evaluated?	Chapters 6–7
• How often did you provide handouts/written materials to participants?	Chapters 5, 7, 21

Adapted from Winton (1993).

icant pretest and 6-month posttest differences. Specifically, participants were more likely to provide instruction that was coordinated with their state's CSPD plan; was endorsed by administrators; included experiential activities, modeling, and demonstration opportunities; used strategies for applying instructional ideas to the workplace; and used instructional strategies that varied to meet different learning styles. However, they were unable to make changes in the planning and evaluation aspects of the instruction. For example, there were no significant differences in quality indicators related to making certification licensure credits available to participants; family participation; interdisciplinary team participation; and the provision of ongoing support, monitoring, technical assistance, or evaluation.

Participants were interviewed by telephone at the 6-month follow-up point on the barriers and facilitators that hindered or helped them accomplish individual goals for making changes in personnel preparation approaches that they identified as part of their SIFT participation. A content analysis of their open-ended responses indicated that the most powerful facilitators to making desired changes were collegial support and follow-up technical assistance from the SIFT project. The barriers they encountered were competing priorities for their time and the unexpected amount of time that it took to make their proposed changes. These follow-up interviews revealed a consistent theme of bureaucratic roadblocks to making some of the changes they perceived as important. For instance, the desire to work with families as instructional partners was tempered by the lack of money to reimburse families for their participation. Because of relationships with families that developed through the SIFT project, they believed they were able to call on families to work with them to some extent. However, they also believed that SIFT had promoted an equitable partnership, and this required reimbursement, which they were unable to secure. Therefore, the partnership they desired was fragile and sometimes not sustained because of problems with administrative support. Despite these barriers, there is evidence that some of the changes created through SIFT have been maintained and sustained within the administrative structures of the universities and early intervention systems (Winton, 1996). Additional follow-up evaluation with participants is planned with the expectation that it will provide more information about what happens after a 3-year federally funded project ends. The use of checklists for quality and evaluation strategies that track outcomes over time (Winton, 1996) are two legacies of this project that should be shared.

CONCLUSION

This chapter summarizes the nuts and bolts of designing instructional sequences that incorporate features designed to assist early intervention personnel in making needed changes. Despite the availability of information about promising practices and quality indicators, there are still some instructors who enter classrooms every day with the set of lecture notes they have used repeatedly (and ineffectively) to teach a particular course. Every day participants are lectured or "inserviced" in a manner that neither complements their knowledge and expertise nor provides useful information or resources for improving their practices. A missing piece in putting it all together is a systematic way to encourage instructors and participants to pursue opportunities to learn more about effective instructional design. This book, especially the resource sections at the end of some chapters, may provide such an opportunity.

RESOURCES

Brookfield, S.J. (1990). *The skillful teacher: On technique, trust, and responsiveness in the class-room.* San Francisco: Jossey-Bass. Cost: $29.95. (415) 433-1767.

Down-to-earth advice to all teachers—both new and veteran—on how to thrive on the unpredictability and diversity of classroom life. Particularly helpful chapters include "Lecturing Creatively," "Facilitating Discussions," "Using Simulations and Role Playing," and "Giving Helpful Evaluations."

Catlett, C., & Winton, P.J. (1996). *Resource guide: Selected early childhood/early intervention training materials* (5th ed.). Chapel Hill: University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Center. Cost: $10. (919) 966-4221.

Product describes more than 300 resources that might assist in designing preservice or inservice training (e.g., curricula, videotapes, self-instructional materials, discussion guides). Resources are divided into 18 sections that correspond with key training content areas (e.g., evaluation/assessment, family–professional collaboration, teams). Emphasis is on materials that are good, readily available, and inexpensive or free.

Eitington, J.E. (1989). *The winning trainer.* Houston, TX: Gulf Publishing Co. Cost: $39.50 plus shipping and handling. (713) 520-4444.

Engaging and dynamic techniques for involving participants in the learning process, increasing retention, and promoting carry over. Sections on getting started (e.g., icebreakers, openers), using small groups effectively, role playing, games, exercises, puzzles, case method, evaluation, and transfer have broad application to preservice and inservice settings. There is even a chapter called "If You Must Lecture . . . ," describing how to make this instructional approach as effective as possible.

Saunders, M.K., & Hawkins, R.L. (1986). *The teaching game: A practical guide to mastering training.* Dubuque, IA: Kendall/Hunt Publishing Co. Cost: $32. (800) 228-0810.

A practical guide designed to assist teachers/trainers of adults. Many useful examples are provided throughout the chapters that focus on the characteristics of adult learners (and what to do about them), the characteristics of adult educators, interpersonal styles and delivery, communication between trainers and trainees, and instructional techniques. The chapter on evaluation and feedback has clear examples of how to write test questions, obtain useful feedback, and encourage self-assessment.

Winton, P. (1993). *What we have learned about Part H personnel preparation.* Unpublished brochure. Chapel Hill: University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Center. Cost: Free. (919) 966-6635.

Pamphlet summarizes research related to effective practices in early intervention personnel preparation.

REFERENCES

Bailey, D., Buysse, V., Edmondson, B., & Smith, T. (1992). Creating family-centered services in early intervention: Perceptions of professionals in four states. *Exceptional Children, 58*(4), 298–309.

Bailey, D., McWilliam, P.J., & Winton, P. (1992). Building family-centered practices in early intervention: A team-based model for change. *Infants and Young Children, 5*(1), 73–82.

Bailey, D., Simeonsson, R., Yoder, D., & Huntington, G. (1990). Preparing professionals to serve infants and toddlers with handicaps and their families: An integrative analysis across eight disciplines. *Exceptional Children, 57*(1), 26–35.

Bergman, A. (1995, March). *Evolution of common sense and disability policy: From institutional to community and facility-based services to support individuals and families in inclusive communi-*

ties. Paper presented to the Think Tank on Therapeutic Services for Children with Disabilities, United Cerebral Palsy Associations, Inc., Washington, DC.

Brookfield, S.D. (1990a). *The skillful teacher: On technique, trust, and responsiveness in the classroom.* San Francisco: Jossey-Bass.

Brookfield, S.D. (1990b). Using critical incidents to explore learners' assumptions. In J. Mezirow & Associates, *Fostering critical reflection in adulthood* (pp. 177–193). San Francisco: Jossey-Bass.

Brookfield, S.D. (1986). *Understanding and facilitating adult learning.* San Francisco: Jossey-Bass.

Bruder, M., Klosowski, S., & Daguio, K. (1989). *Personnel standards for ten professional disciplines serving children under P.L. 99-457: Results from a national survey.* Farmington: University of Connecticut Health Center, Division of Child and Family Studies, Department of Pediatrics.

Catlett, C., & Winton, P.J. (1996). *Resource guide: Selected early childhood/early intervention training materials* (5th ed.). Chapel Hill: University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Center.

Deshler, D. (1990). Conceptual mapping: Drawing charts of the mind. In J. Mezirow & Associates, *Fostering critical reflection in adulthood* (pp. 336–353). San Francisco: Jossey-Bass

Edelman, L. (1995, February). *Learning styles, training activities, problem solving activities, and the role of training and learning.* Workshop presented at the NEC*TAS Conference on Adult Learning and Evaluation of Training and Technical Assistance, San Diego, CA.

Eitington, J.E. (1989). The *winning trainer.* Houston, TX: Gulf Publishing Co.

Fenichel, E. (Ed.). (1992). *Learning through supervision and mentorship to support the development of infants, toddlers, and their families: A sourcebook.* Arlington, VA: ZERO to THREE/National Center for Clinical Infant Programs.

Gallagher, J. (1993, January). Carolina Policy Studies: Findings and future directions. *Frankly Speaking.* (Available from Frank Porter Graham Child Development Center, University of North Carolina at Chapel Hill, CB#8185, Chapel Hill, NC 27599-8185)

Hanson, M.J., & Brekken, L.J. (1991). Early intervention personnel model and standards: An interdisciplinary approach. *Infants and Young Children, 4*(1), 54–61.

Harris, B.M. (1980). *Improving staff performance through in-service education.* Needham, MA: Allyn & Bacon.

Hile, J. (1992, April). Getting the lead out. *Training and Development,* 9–10.

Klein, N.K., & Campbell, P. (1990). Preparing personnel to serve at-risk and disabled infants, toddlers, and preschoolers. In S.J. Meisels & M.P. Shonkoff (Eds.), *Handbook of early childhood intervention* (pp. 679–699). New York: Cambridge University Press.

Kolb, D. (1985). *Learning Style Inventory: Self-scoring inventory and interpretation booklet.* Boston: McBer and Company.

Lukinsky, J. (1990). Reflective withdrawal through journal writing. In J. Mezirow & Associates, *Fostering critical reflection in adulthood* (pp. 213–234). San Francisco: Jossey-Bass.

McBride, S.L., Sharp, L., Hains, A.H., & Whitehead, A. (1995). Parents as co-instructors in preservice training: A pathway to family-centered practice. *Journal of Early Intervention, 19*(4), 343–355.

McWilliam, P.J. (1992). The case method of instruction: Teaching application and problem-solving skills to early interventionists. *Journal of Early Intervention, 16,* 360–373.

McWilliam, P.J., & Bailey, D.B., Jr. (Eds.). (1993). *Working together with children and families: Case studies in early intervention.* Baltimore: Paul H. Brookes Publishing Co.

Meyers, C., & Jones, T.B. (1993). *Promoting active learning: Strategies for the college classroom.* San Francisco: Jossey-Bass.

Mezirow, J. (1991). *Transformative dimensions of adult learning.* San Francisco: Jossey-Bass.

Middendorf, J., & Kalish, A. (1996). The ''change-up'' in lectures. *FORUM, 5*(2), 1–5.

Moore, J. (1988). Guidelines concerning adult learning. *Journal of Staff Development, 9*(3), 1–5.

Parent Educational Advocacy Training Center. (1990). *NEXT STEPS: Planning for employment.* Alexandria, VA: Author.

Rooney, R., Gallagher, J., & Fullagar, P. (1993). *Distinctive personnel preparation models for Part H: Three case studies.* Chapel Hill: University of North Carolina at Chapel Hill, Carolina Policy Studies Program, Frank Porter Graham Child Development Center.

Rooney, R., Gallagher, J., Fullagar, P., Eckland, J., & Huntington, G. (1992). *Higher education and state agency cooperation for Part H personnel preparation.* Chapel Hill: University of North

Carolina at Chapel Hill, Carolina Policy Studies Program, Frank Porter Graham Child Development Center.

Saunders, M.K., & Hawkins, R.L. (1986). *The teaching game: A practical guide to mastering training.* Dubuque, IA: Kendall/Hunt Publishing Co.

Smith, R.M. (1982). Some programmatic and instructional implications of the learning how to learn concept. *Proceedings of the Adult Education Research Conference, No. 23.* Lincoln: University of Nebraska.

Sullivan, R.L., Wircenski, J.L., Arnold, S.S., & Sarkees, M.D. (1990). *A practical manual for the design, delivery, and evaluation of training.* Rockville, MD: Aspen Publishers, Inc.

Winton, P. (1993). *What we have learned about Part H personnel preparation.* Unpublished brochure. Chapel Hill: University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Center.

Winton, P., McWilliam, P.J., Harrison, T., Owens, A., & Bailey, D. (1992). Lessons learned from implementing a team-based model of change. *Infants and Young Children, 5*(1), 49–57.

Winton, P.J. (1990). A systemic approach for planning inservice training related to Public Law 99-457. *Infants and Young Children, 3*(1), 51–60.

Winton, P.J. (1996). A model for supporting higher education faculty in their early intervention personnel preparation roles. *Infants and Young Children, 8*(3), 56–67.

Wolfe, B. (1992, June). *What works: What we know about effective preparation and professional development programs.* Paper presented at the National Association for the Education of Young Childrens National Institute for Early Childhood Professional Development, Los Angeles, CA.

Wolfe, B. (1993, January). *Best practices in Head Start inservice training.* Paper presented at the NEC*TAS Combined Meetings, Washington, DC.