CHAPTER 4

DESIGNING EFFECTIVE INSTRUCTION

If you were assigned to provide training or to prepare a publication on the subject of nurturing the developing child, how would you organize or structure your presentation? Are there rules or guides for making it effective?

Many of us would begin with a definition of *nurture*. We might then summarize what is known on the subject of nurturing children, including effective nurturing practices. If we are effective teachers, we will probably include stories to make our instruction more interesting and pertinent. And we will invite listeners or readers to apply the principles to their own situations. But is there something more than intuition and raw experience to guide this process?

The answer is yes. There is a substantial and growing science of instructional design. In fact, there is far more science behind instructional design than average family life educators need to know. So while family life educators do not need to become entirely focused on instructional design, they can be far more effective if they are familiar with many of the core principles.

This chapter is dedicated to discussing and applying two bodies of work by M. David Merrill, professor of instructional technology at Utah State University. His theory or framework is the centerpiece of this chapter because it is widely used in the instructional design industry, has been substantiated by research, and provides practical recommendations to those who are preparing instruction.

● COMPONENT DISPLAY THEORY

David Merrill (1983, 1994) has developed a system of instructional design that is called component display theory (CDT). There are parts of CDT that are beyond the purview of this chapter and most family life educators. However, Merrill's discussion of primary presentation forms can provide a very useful guide in the development of short presentations, extended training, and publications—any form of family life education (FLE).

If you are a person who understands tables readily, Table 4.1 will summarize the key elements of CDT in a simple form. If you do not readily comprehend the table, the text below should make the ideas clear without the table.

Let's use Merrill's (1983, 1994) CDT theory to guide the development of a lesson or publication on the topic named above: nurturing the developing child. A common way to begin would be to share a principle with the learners. Merrill calls this an expository generality (EG), which simply means that the teacher tells (called "expository" mode) some general idea, principle, concept, truth, or process (a generality). So the generality might be "Children are most likely to grow into compassionate, productive adults when they are cared for by people who are sensitive to their needs, are committed to them, and build close relationships with them."

TABLE 4.1 The Component Display Theory

The Primary Presentation Forms of Component Display Theory		*Kind of Content*	
		Generality (G), rule, definition, principle, or procedure	Instance (eg), a specific example of an event, process, or principle
Mode of Delivery or Presentation	Expository (E): present, tell, or show	1. EG: Tell a rule or principle	2. Eeg: Give an example or story that supports the principle
	Inquisitory (I): question, ask, or learner practice	3. IG: Invite learners to express the rule in their own way	4. Ieg: Ask learners to think of their own experiences that illustrate the principle

SOURCE: Adapted from Merrill (1994, p. 121).

This simple statement undergirds the most important process in parenting (Peterson & Hann, 1999). Nothing matters as much as nurturing. A clear, direct, simple expression of this principle (EG) is a good way to start the teaching—though not the only way.

For those who are familiar with scholarship on the subject, the clear statement of principle is rich with meaning. For the typical learners, the meaning of the statement and its applications to their lives may not be clear. The typical learner will need far more instruction than a mere statement of principle.

Using Stories That Teach the Principle

To help learners understand just what the principle means, the teacher may next choose to provide examples (Eeg or expository instances) that illustrate the major points. If, for instance, we wanted to illustrate the importance of sensitive caregiving in the development of children, we might tell a story about a caregiver who responds to infant distress with support, soothing, and patience and the beneficial effects of such care. For the sake of clarity, we might also tell a contrasting story of care that is brittle, angry, and impatient and the negative consequences of such care.

To provide parents with an application of the principle, we might tell about a little boy named Riley who had colic. His parents didn't have much experience with babies or with colic. At first they wondered if they had a bad child. They wondered if they should just ignore the boy's crying in order to break the habit. But they had been told that infants sometimes get colic and need soothing. So Mom and Dad took turns rocking, singing, and patting Riley when he had colic. They helped and supported each other. When they were both worn out, they might lay Riley down in his crib for a few minutes. But even in this stressful situation, both parents made real efforts to be sensitive to Riley. Within a few weeks, the colic began to fade. While it had been a difficult time for the family, Riley had developed a sense that his parents would respond sensitively to his distress. What a great foundation for trust!

Teaching is made more interesting and effective by the use of appropriate stories. They can help learners see how an abstract principle applies to real life. They can also help learners remember the general principle. We learn through stories.

The colic story is especially appropriate for parents of infants who are likely to have children with similar problems. Multiple stories with diverse situations might be helpful. For example, Ellyn Satter has written a book

(1999) and developed a video (1995/1997) that illustrate sensitive feeding of children. In the video, she shows a parent whose sole objective appears to be to get the bottle of baby food inside the baby as quickly as possible. The parent does not talk with the child or wait for the child's signs of interest in food. The parent just shovels the food into the child. In fact, it seemed clear that the child ran out of interest in the food long before the food ran out. The parent continued to shovel the food into an increasingly unhappy child. That is a good example of nonsensitivity.

In contrast, Satter (1995/1997) also shows parents who are sensitive to the child. They engage the child in playful conversation. They offer the food so the child can see it. They allow the child time to process the food. They notice when the child loses interest in the food. Her principle related to sensitive feeding is that "nutrition has a way of falling into place when people are the priority rather than the rules that govern them." In a workshop teaching situation, Satter's video might be used or stories from her book might be shared. If you are preparing a publication on this subject, you might tell your own stories (or the stories of parents you know) or seek permission to reprint Satter's stories.

If your audience includes parents of school-age children, the stories would naturally revolve around the challenges and opportunities they will face with their children. For example, they might involve sensitivity to the children's challenges at school, their disappointments, rivalries, or difficulties in getting chores done. Even in such situations, the same general principle presides: When parents are sensitive to their children and their needs, the children are more likely to grow into socially competent people.

Each of the subparts of a principle can be taught in the same way. The principle as stated above has at least three major subparts dealing with the importance of sensitivity, commitment, and close relationship. Stories can be shared to illustrate each part of the general principle. As you can imagine, there might also be additional subprinciples taught along the way. For example, in teaching about the importance of close relationships, the teacher may teach about the characteristics of effective listening or about taking time with children. Each lesson may have one central principle and a network of supporting principles.

As you select stories to illustrate principles, it makes sense that you would use stories that your clientele can relate to. You are not likely to share stories of parents dealing with teens' careless driving if you are teaching parents of young children. In some cases, you may have a very diverse audience, including parents of a broad age range of children and very diverse life situations. It makes sense to offer a range of stories, but it also

leads to another mode of learning, the mode that Merrill (1983, 1994) calls the inquisitory mode, suggesting that the teacher is inviting participation by the learners.

Helping Learners Take the Principles Home

Let's start with inquisitory generalities (IG). This step could involve asking participants to recall or repeat the rule or principle about nurturing young children. It should go beyond parroting back the original statement and invite learners to express the principle in their own words and way. Answers may be very diverse. One participant may express the principle as "Ya gotta love 'em." Is that expression of the principle acceptable? The answer is, "It depends." We might ask the participant, "Will those words help you remember to act in the ways we have talked about?" If the answer is affirmative, then that expression of the principle is satisfactory. If not, the participant might suggest how to modify his or her statement to capture the full meaning of the original principle.

The objective is not to push participants toward our words but toward actions congruent with the principle. That is why we ask, "Will those words help you remember to act in the ways we have talked about?"

Each person may have a different way of expressing the principle. "I gotta notice my kid." "I must stop being in a hurry." "I need to take time for my children." While those words may each express something very different from the original principle, each may capture that part of the principle that the participant is ready to live. The object of all instructional activity is to move participants toward actions congruent with principles.

Once the participants have their own handle on expressing the principle, effective application can be advanced by encouraging them to think of situations from their own experience where they can see the principle at work. Since we are asking the learners for their stories, Merrill (1983, 1994) calls this inquisitory instances (Ieg). Participants may tell their own stories related to the principle. An able teacher will help learners see the principle (EG) at work in their stories.

Some of the participants' stories may not seem to illustrate the principle very well. We can invite them to make the connection clear: "Do you see the principle of nurturing young children in that story?" Or if the story simply does not illustrate the principle at hand very well, a sensitive teacher might respond, "That story beautifully illustrates another principle of parenting that we will discuss later in this series. Do you have any stories that illustrate the power of love to help children grow and develop?"

Finding Instructional Balance

One way of thinking about Merrill's (1983, 1994) CDT is as a reminder to balance. Related to mode of delivery, the theory reminds us to balance the leader talk with participant talk. Certainly each participant has something valuable to contribute. The leader should bring expert knowledge as well as facilitation skills. The learners bring their own discoveries, creativity, expertise, and wealth of experience. When they work well together, great discoveries can be made.

Balance between leader and participant does not necessarily mean equal time. Instead, it suggests that each be involved in ways that advance learning. In the early stages of a class, the leader may need to take more initiative. As participants become more comfortable, they may contribute more and more to the class.

Related to the kind of content, Merrill's (1983, 1994) theory reminds us to balance generalities with instances. We have all been bored by lectures that described laws and principles but never touched down in human experience. Perhaps we have also heard presentations that were filled with stories but failed to clearly identify any general principles. When there is a healthy balance of the two, learning is facilitated.

Instruction Outside a Classroom

Much of the foregoing discussion presumes that the instruction will be delivered in face-to-face instruction. It is also useful to use CDT in organizing print materials. While a print teaching process does not allow for full-fledged interaction, many effective parenting publications provide questions that invite participant thought and reaction. Many such publications provide a place for participants to write their reactions. They may also invite participants to discuss the ideas with other family members, respected peers, or potential mentors.

When learning is done in an electronic mode, responses can be programmed into the computer software. Or, in the case of online learning, there may be interaction between the students and between students and teaching assistants.

In Chapter 5, we will explore additional ways to support and encourage learner participation. The focus of this chapter is designing instruction that is likely to help learners understand and apply principles for better family life.

Mixing the Elements of Instruction

The foregoing discussion may seem to suggest a lockstep march through a process. The reality of effective teaching is much more random and exciting. A teacher may choose to mix the instructional elements to fit the learners and the subject. For example, a teacher may choose to begin with one or more stories (Eegs) before making a statement of the principle (EG). Beginning with interesting stories may be an effective way of engaging learners' interest.

A lesson may also begin with an inquisitory generality. For example, you might invite learners to respond to the question, "What do you think is the most important thing parents can do to help their children turn out well?" If the teacher or leader dismisses answers that are not the one he or she has in mind, participants are likely to be turned off. However, a skillful teacher can respond to every answer positively: "What an important principle!" "You have probably seen that make a real difference!" Each can be written on the board or flipchart.

In the course of the discussion, someone is likely to nominate the principle that is the subject of the session, to which the teacher can respond, "That is very important. And it happens to be the one that I would like us to talk about today." An inquisitory generality may be a good way to begin if you want to get participants thinking about the general lessons they have learned.

A lesson might also begin with an inquisitory instance. We might ask, "Would you tell me stories from your parenting experience that taught you important lessons of parenting?" After listening to several stories, the leader might comment, "Thank you for sharing your stories. One of the themes I see in many of them is the importance of nurturing children." Beginning with their stories may allow the learners to see from the beginning that the general principle (EG) is tied to their lives.

Each approach has advantages and disadvantages. It requires a skillful teacher to begin in the inquisitory mode. It may also require more time to get to the central point. Yet this approach may be useful for some audiences and some subjects.

FIRST PRINCIPLES OF INSTRUCTION ●

On the basis of decades of experience in instructional design, David Merrill (2001) has created his own nominations for the first principles of instruction. He has compared his recommendations with those that come

from prominent instructional models and found the common themes across most of the models. In the balance of this chapter, we will consider how these principles might be applied to the challenges faced by family life educators.

Instruction Addresses Real Problems

Merrill's (2001) first principle states that "learning is facilitated when the learner is engaged in solving a real-world problem" (p. 461). In this arena, school learning is disadvantaged. Most problems that are presented in school classrooms are artificial. (Think of those story problems in algebra or analyses of poems done in literature classes.) Family life educators have a big advantage in this arena. Family life is filled with real-world problems. Family problems tend to be real and personal. In fact, it is characteristic of family life that our relationships are close and continuing—just the right combination to present real-world problems.

Consider ways of applying this first principle to FLE. Imagine that you are teaching a class about the importance of commitment in couple relationships. You might set the stage by sharing a story from your own life or from a print source that illustrates the challenges of commitment.

For example, you might share a story from John Glenn's (1999) autobiography. He tells that his wife was bashful in part because of a problem with stuttering. He was often in the public eye. There were times when he had to choose to be involved in his profession the way people expected him to be or to be sensitive to his wife's preferences. He chose to honor his commitment to his wife.

You can invite participants to consider times when they were discouraged with their partner relationship, when they felt like giving up. Rather than have them share stories that could be painful for their partners, you could invite them to list some of the difficulties couples face that could challenge their commitment to each other. Such a discussion is likely to make the issue very real for all participants; it would be the rare participant who would not think of his or her own challenges with commitment.

Each person could be invited to identify a specific situation in which he or she found it difficult to show commitment—and make either a mental or written note. Then class members could be invited to share ideas for sustaining commitment. As the group suggests ideas, each person is invited to make note of those ideas that could be useful in his or her relationship.

Of course, group discussion is not the only path to learning. The work of Lev Vgotsky (see Rogoff, 1990) underscores the importance of learning from experts. In many arenas of activity, skill is learned through apprenticeships. Family life educators can invite people to interview those who have succeeded at the processes under study. A young couple might interview a seasoned couple, asking them about ways they have shown commitment to each other. Younger couples can also be invited to be quiet observers of couples who have learned to work well together.

Family life educators may also be involved with problem solving in after-class discussions or in home visits. For example, on a periodic home visit, a parent may ask the visitor what to do about a lazy daughter. The wise educator will not spout some canned wisdom but will model problem solving with her carefully chosen questions. "Tell me more about what your daughter is like." "In what situations is she lazy?" "Are there situations where she is not lazy?" "What have you tried to help her do better?" "Have any of those efforts paid off?" "Can you see any special reasons why she might not do well in the areas where she has seemed lazy?"

All of these questions are intended to help the parent move beyond frustrated judgment of a child to productive problem solving. They set the stage for the most important question: "Can you think of anything you can do to help your daughter function better [i.e., be less lazy]?" The parent might not have ready answers. A helpful educator might suggest some possibilities: "Do you think she fails to do certain chores because she hates those particular tasks? Or because she doesn't like to be rushed? Or because she doesn't know how?" Effective family life educators facilitate their participants' real-world problem solving.

Of course, it is generally unwise to start education with the most emotion-invoking and long-lasting problems. Merrill (2000) recommends that learners deal with "a progression of carefully sequenced problems" (p. 5). That is one reason that it is advantageous to start family life education preventively. When a parenting or partner relationship has been toxic for years, it is difficult to turn the tide.

Activating Existing Knowledge

Merrill's (2001) second principle is that learning is facilitated when existing knowledge is activated as a foundation for new knowledge. For example, if we were interested in teaching a group of parents to tune in to their children's languages of love, we might begin by inviting them to think about times in their childhoods when their family members tried to

show them love. We would encourage them to think about efforts that were more or less effective. While all of the efforts to communicate love might be sincere, some were probably effective and others may have been counterproductive. We might discuss what made the difference.

Participants would probably recognize that some efforts were well tuned to our preferences and some were not. If a family member who knows I am on a diet still buys me a candy bar as a gift, I might not be appreciative. By recognizing the importance of attunement to the other person—awareness of that person's needs or preferences—we can become more effective at showing love.

To take this idea one step closer to the parents' task of showing love to their children, we might ask the parents to think about efforts they had made to show love to their children that had been more or less effective. By analyzing their efforts to show love to their children, they might determine their children's preferences or languages of love.

While the discussion of previous experience does not create new knowledge, it does bring existing knowledge to a more conscious level and organizes it into a form that can guide intentional action.

In some cases, it may be useful to create a new experience for learners as a foundation for the new learning. For example, family members in a weekly class might be asked to wear some special mental glasses that allowed them to notice only the good things that their partner or children do. Imagine that the glasses entirely block out annoyances and disappointments. Notice the good, record it, and return to the next session to discuss what they noticed and experienced.

It is possible that such an assignment would set the stage for teaching class members about the processes by which humans judge the motives of others and about the power of the mind to interpret and filter experience. It could provide personal experience relevant to the lesson to be taught.

The Power of Demonstration

Merrill's (2001) third principle states that learning is facilitated when new knowledge is demonstrated to the learner. It is not uncommon for people in classes to be taught a new principle, presented with a dilemma, and asked to tell how to respond. The task may seem easy to those who are familiar with the principle and have tried to apply it for years. But the jump from current experience to new performance can be daunting for many learners.

For example, it is common in both parenting and couple relationship trainings to teach people about empathic responding. We teach people to attend to the emotional experience of their child or partner and try to express in words what that person may be feeling. It may seem easy enough—but decades of experience can work against ready application of the principle.

Imagine that we have taught parents about empathic listening in parenting. To give them a chance to practice, we ask them to imagine that one of their children has come home from school with slumped shoulders and confessed to getting in trouble at school. In fact, the teacher yelled at your child and called him names. At this point, you invite parents in your class to tell what they would say if they were responding empathically to the upset child. We suspect that the natural parental tendency to play like a cross-examining investigator will swamp the valuable lessons parents may have learned in a parenting class. Habit regularly trumps new learning.

Especially as participants learn new and difficult skills, it might be useful to invite them to tell what they would normally say under such circumstances. "Under normal circumstances, what might a parent say in response to a child who has come home and reported trouble at school?" Parents can report their automatic response. For example, one parent might respond, "I would find out what my son did to get into trouble!" Your response as an educator can open the way for the new learning: "That is a very normal reaction. Let's think about how it would work. How do you think your son would feel if you quizzed him about what he did to get himself in trouble? Would it effectively convey your compassion and understanding? Would it prepare him to try better behavior?" The answer should be obvious to any parent who is not defensive.

As the ineffectiveness of our automatic reactions becomes clear, the way is open for the educator to invite new thinking: "What might a parent do that would show more compassion?" In response to any answer, you can direct the person to the effect on the child. This process demonstrates just how difficult new skills can be while pointing the parents to the ultimate test of their actions: How do the actions affect the child?

As a family life educator, you can also suggest parent responses while inviting the parents to test them by the same standard. "How would your child feel if you said, 'Oh, son! You must have felt humiliated to be chewed out in front of your classmates!'" Truly empathic listening is so contrary to humans' automatic and egocentric responses that it takes lots of practice. But "learning is facilitated when new knowledge is demonstrated to the learner" (Merrill, 2000, p. 2). Many demonstrations over many sessions may be necessary for effective learning.

Applying New Knowledge

Merrill's (2001) fourth principle states that "learning is facilitated when the learner is required to use his or her new knowledge to solve problems" (p. 463). There are no written tests that qualify a person as a good family member. The application of knowledge is the end goal of FLE.

Between sessions of FLE, it is common to make assignments to participants. For example, after teaching about the importance of thinking positively about one's partner, each participant might be encouraged to think of a quality or behavior that is most appreciated in the partner. Once the quality is identified, each participant can be encouraged to think of a way to prompt remembering that quality in the hours and days ahead. Some might choose to tie a string around a finger or carry a keepsake in a shirt pocket. Participants are encouraged to use the prompt to remember the quality regularly, especially in times of stress. Each is asked to make a mental or written note of successes and struggles that might be shared with the class in the next meeting of the group (whether face to face or online).

Merrill (2001) observes that "appropriate practice is the single most neglected aspect of effective instruction" (p. 464). The new behavior needs to be practiced. Gottman (1994) refers to extensive practice as overlearning. He recommends that partners overlearn their new skills so that they have a fighting chance when they face a challenge and are tempted by habit to fall into unproductive if overritualized patterns.

Practice can happen in both instructional and real-world settings. Family life educators can facilitate such field learning by providing learners a standard by which to judge their performance. For example, an educator might teach participants in a parenting class to judge any responses to parenting problems by a two-part test: (1) Is the solution likely to improve the behavior? (2) Does the solution show respect for the child? When the parents have a standard for judging their new solutions, they are more likely to turn to new behavior than fall back on old habits.

Turning again to Merrill (2000): "Most learners learn from the errors they make, especially when they are shown how to recognize the error, how to recover from the error, and how to avoid the error in the future" (p. 8). Many of us have spent decades trying to get better at practicing what we preach. We can provide relevant practice to help our participants apply knowledge to their lives across time.

New Knowledge Integrated Into the Learner's World

Merrill's (2000) fifth and final point is that "learning is facilitated when new knowledge is integrated into the learner's world" (p. 2). Learners may benefit from making specific and practical plans for integrating their new knowledge into their family lives. They can engage in periodic discussions with co-learners or support groups. They can keep a journal of their performance.

They may also benefit from teaching their newfound knowledge to others. There is nothing quite like teaching to force us to understand a principle and how it works. Your participants might be invited to give a mini-lesson to the class, to teach a group at work or in their faith community.

Merrill (2000) observes that there is no satisfaction quite like moving from student to teacher or mentor. "The real motivation for learners is learning. When learners are able to demonstrate improvement in skill, they are motivated to perform even better" (p. 8). The combination of integrating the skills into everyday life and sharing them with others cements the lessons.

CONCLUSION ●

When instruction—whether oral or written—is designed according to established principles of instructional design, the message is more likely to be effective. In addition, the instruction is more likely to be enjoyable for both the educator and the participant.

EXPLORATIONS ●

1. Review the lesson that you created using the component display theory above for its consonance with Merrill's first principles of instruction. Enlarge or refine your lesson as necessary. Identify the way you will facilitate learning in each of the ways described in Merrill's five principles by placing a numeral 1 through 5 next to the part of your lesson plan that facilitates learning in that way.

2. Now that you are familiar with all four elements of Merrill's CDT, take a speech, lesson plan, or outline—any deliberate instruction—and

identify the four elements: EG, Eeg, IG, and Ieg. Evaluate whether adding more of one or another of the elements would have made the presentation more effective for the purpose it was delivered.

3. Develop a lesson plan or pamphlet to teach a principle with which you are familiar. In fact, it would be useful to select a subject that you have taught before or are likely to teach in the future. Create the instruction using (and labeling) all four elements of Merrill's CDT. Describe your audience and justify your combination of elements based on the needs of your target audience and your instructional objectives. Share your work with a classmate for feedback. If you have created a lesson plan, seek an opportunity to use the plan to teach a group and invite a classmate or colleague to give you feedback.