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Designing for the Synchronous Classroom

I remember being introduced to the process of instructional systems design (ISD) over a decade ago. I was working in a corporate training department of 40+ people, and all of us had spent quite a bit of time developing training classes of various types. Out of the blue, the word came down that we were all to learn a "systematic approach to program development." Well, they might as well have said that we needed to learn a new way to breathe. How dare they imply that we didn't know how to create a training program?! We had been successful so far, hadn't we? I was very worried because my style is not one that lends itself to a lot of structure and I felt that I would not be able to succeed with a dictated process.

They locked us in a room for ten hours (all 40+ of us) and gave us the overview of ISD. Then we all needed to go off and use the process to develop a project. Surprisingly (to me anyway), I embraced the process and became a convert. More than that, I am often considered "over the top" when it comes to applying a systematic approach to design of synchronous programs.

Instructional design is a critical component of creating a successful synchronous program. Applying a systematic process of design will help to ensure that your participants are learning, even though the trainer cannot physically see them.

There are many instructional design models. Some are much more detailed than others, but all have a level of applicability to designing for the synchronous classroom. A common model called the ADDIE mode is composed of five high-level steps, listed below and expanded on in Figure 1.1.

- Analyze—Identify the probable causes for a performance gap
- Design—Verify the desired learning objectives, the learning tasks, and the appropriate testing strategies.

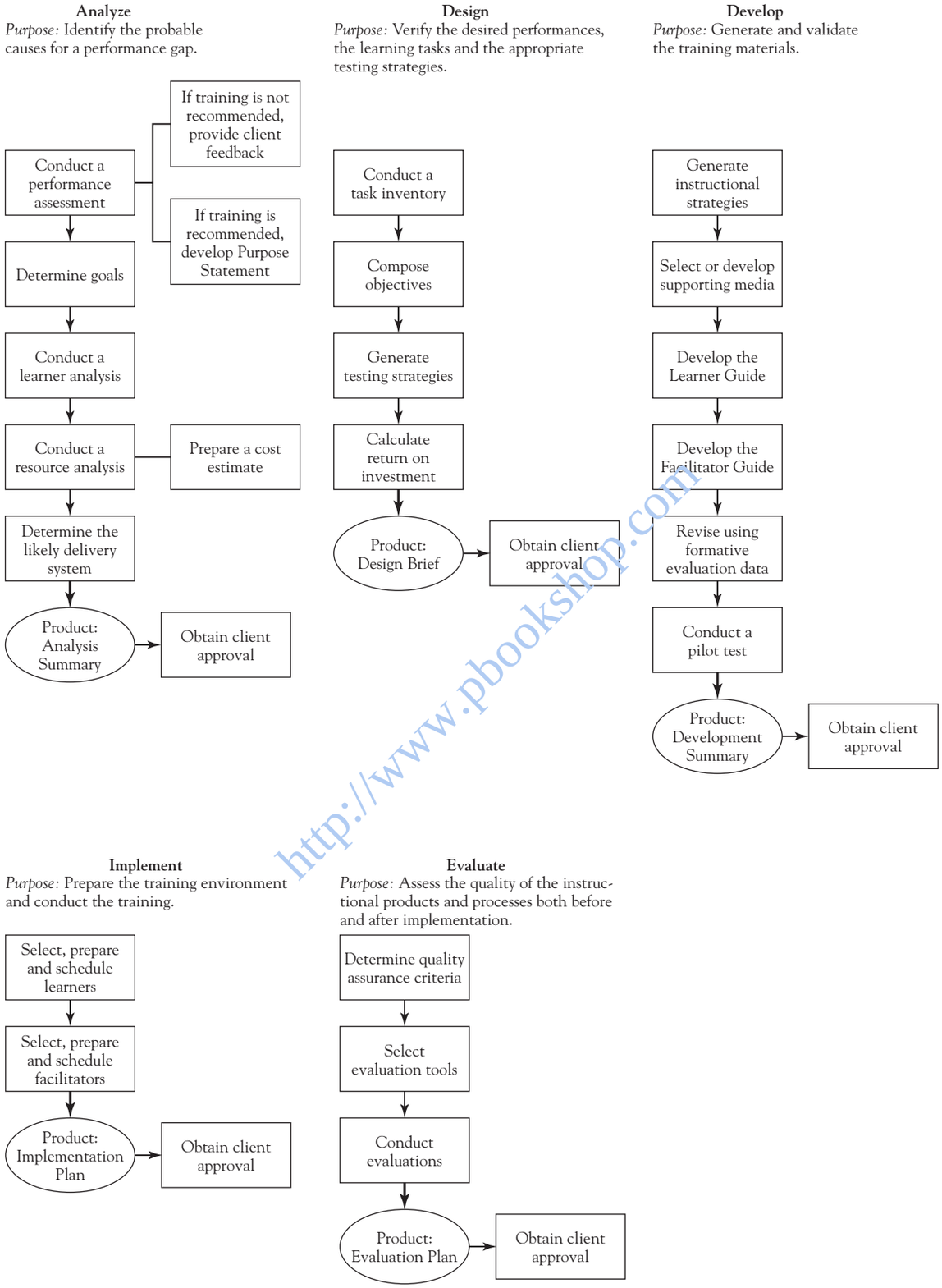


FIGURE 1.1 The Expanded ADDIE Model.

- Develop—Generate and validate the training materials.
- Implement—Prepare the training environment and conduct the training.
- Evaluate—Assess the quality of the instructional products and processes both before and after implementation.

I find that if I can get my customers to sit down for a day-long design session to determine the correct performance objectives, associated test items, and associated evaluation criteria, the rest of the process comes easily. There is plenty of content to be incorporated in most situations, but it's applying it properly that makes a good program.

Most of this book is focused on *designing* and *developing* effective synchronous exercises. (Instructional design resources are available in Appendix G.)

The Importance of Instructional Design in Web-Based Training

While most training professionals will agree that applying instructional design when developing courseware is important and results in a better program, it is rarely applied effectively. The amount of time that it takes to conduct an in-depth needs analysis, systematically apply instructional design, and revise instruction based on evaluation feedback is seen by most project sponsors as excessive. The process is also considered to be expensive—especially the evaluation and revision stage. Management expects that the program will be right the first time.

Instructional designers have found many ways to short-cut the process in order to make up for the lack of time and resources. They make their best guesses, create materials, and hope for the chance to sit in on early course deliveries so they can use them as an unofficial pilot class and be able to update the design and materials based on their observations.

Fortunately, the traditional stand-up training environment provides quite a bit of flexibility and room for creativity. A skilled trainer, familiar with the program content, can often compensate for a faulty design. Changing exercises, shortening breaks, and making determinations about which content is the most appropriate to deliver based on the group of participants in front of them is an exercise most trainers perform automatically. When a program is managed successfully, participants often do not notice design flaws.

e-Learning, both asynchronous (self-directed with or without a trainer) and synchronous (real-time), are less forgiving delivery platforms than the traditional classroom. When an exercise doesn't work, it is often immediately

obvious to the participant. In asynchronous programs, the trainer is not able to observe the breakdown of the process, and participants are left struggling to compensate for the weak design. While synchronous trainers have more opportunities to try different exercises, the short periods of time available are very limiting. For example, trainers cannot cancel lunch or shorten breaks. Typical synchronous sessions are one to two hours in length. Because of this, synchronous participants are not very forgiving of a program that ends 15 or 30 minutes past the scheduled time. Worse, synchronous trainers do not have the benefit of eye contact and body language to alert them that participants are having problems understanding or applying content. Unless a true assessment plan is part of the process, the trainer may walk away thinking that successful knowledge transfer has occurred, when in reality participants are left confused.

An unsuccessful e-learning program can impact the organization in several ways. Most apparently, participants are left without the knowledge and skills required to do some aspect of their jobs. Resources that could have been applied toward a more successful initiative were wasted. Training professionals, not eager to have dispersions cast on their own credibility, may be ready and willing to support the idea that the technologies were not appropriate for the content. While some objectives may not lend themselves to online instruction, too often technology is blamed for the lack of planning and design on the part of the course development team.

As an instructional designer, I know that the application of the ISD process always results in a better program, *but it is much more important in e-learning initiatives*. Look back at web courses that failed in your organization. Can you identify design flaws that affected the course? Try to document and learn from those mistakes.

Common Design Problems and Suggested Solutions

Instructional designers new to the field of synchronous training technologies often make the mistake of assuming that synchronous classrooms are simply re-creations of traditional classroom settings. All the familiar elements seem to be present—most notably a live trainer and an audience participating in real-time. They (instructional designers) are given some basic guidelines: make it interactive, teach in one- or two-hour increments, try to use the technology, and so on. And do it fast!

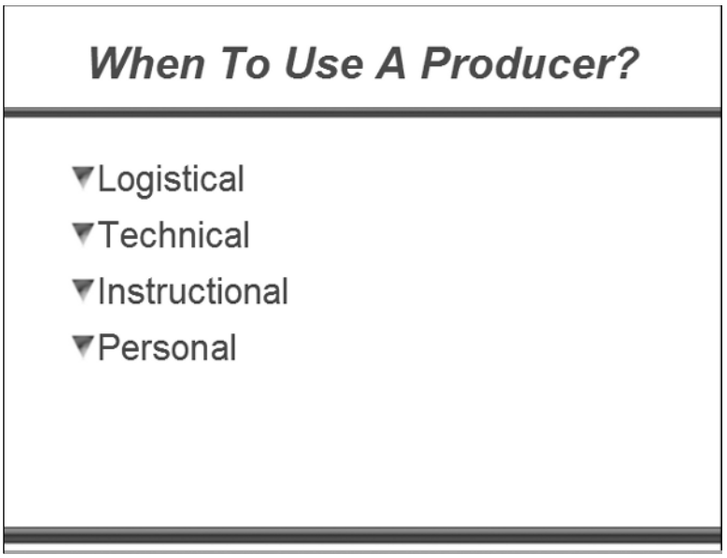
The most common mistake new synchronous instructional designers make is to not participate in many, indeed any, synchronous programs. Traditional programs are converted to fit into the assigned time periods (one hour, ninety minutes, or whatever). Content and exercises are dropped

(dumped!!) online with little thought given to how those exercises will work online. In reality, the synchronous medium is very different from traditional programs. Because participants are geographically dispersed and trainers cannot rely on body language and eye contact, exercises need to be redesigned to maximize engagement and facilitate the transfer of knowledge. One of the necessary preparatory steps for instructional designers new to the synchronous medium is to attend as many online programs as possible so that they understand the experience of the online participant. Concurrently, designers need to be given the opportunity to learn as much about their synchronous platform as possible. It is not enough, for example, to know that a "whiteboard" is available. They need to know the particular characteristics of a specific whiteboard. For example, "What drawing tools can be used?" or "How many people can write on the whiteboard at once?" Once the participant experience and the technology are mastered, the instructional designer is much better prepared to create effective synchronous courseware.

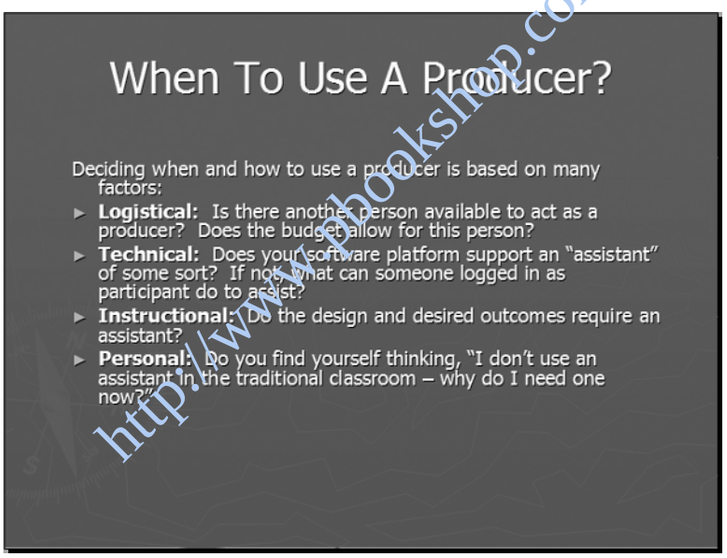
A list of synchronous tools, their instructional uses, and questions to ask about them, can be found in Appendix B.

Another common mistake made when creating synchronous content is the overuse of PowerPoint® content. (PowerPoint is the tool most widely utilized for the creation of synchronous content. After a slide show has been created in the presentation software, it is imported into the learning environment using the synchronous platform's course assembly function.) Slides are packed with bulleted data. The problem with this approach to data creation is that screens become too "busy." Participants, after taking a minute to read the screen, tend to "tune out" the trainer's voice and concentrate on the bullet points. Any additional commentary or stories provided by the trainer seem not to be as important as what is preprinted on the slides. This can cause an additional problem. New synchronous trainers, unsure of how to facilitate in this new environment, have a tendency to rush through the reading of content-heavy slides and create an environment in which interaction is minimized. Slides should be created with a minimum of words and should instead have concepts, questions, and/or graphics that encourage conversation, as shown in the sample slides in Figure 1.2.

Sometimes designers try to use the technology inappropriately. For example, one organization that I worked with had a strict guideline that a poll needed to be incorporated into a synchronous course at least every five minutes. (In this context, a poll was a multiple-choice question designed—theoretically—to test comprehension.) This met their minimum



Well Designed



Poorly Designed

FIGURE 1.2 Two Sample Slides.

requirement for how they defined participant interaction, but did not consider whether or not a polling question made sense from a design perspective or whether another interaction might be more appropriate. A sample is shown in Figure 1.3.

To this group, polling the audience satisfied the need for interaction in the program. Instead of arbitrarily creating rules for tool use, the designer should consider the objectives of each exercise and incorporate the tools to support the content and objectives. Don't let the medium become the message!

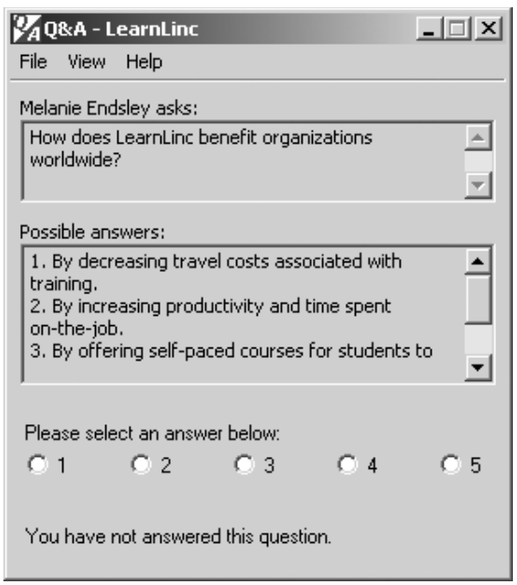


FIGURE 1.3 Sample of a LearnLinc Polling Question.

The *design phase* is often best accomplished by a team. When a group, prepared with a completed analysis and a set of validated learning objectives (and, of course, an understanding of the available tools!), can sit down and brainstorm the most effective ways to deliver the content, the result is often collaborative, engaging, and instructionally sound exercises.

What Can Be Taught Online?

Two general categories of online training are *synchronous* and *asynchronous*. Each methodology has its representative tools. Synchronous delivery systems include real-time interactive tools like chat, whiteboarding, two-way voice, and application sharing. Asynchronous delivery systems include facilitated collaborative tools that students can use at a time that is convenient for them (like discussion boards and email) and self-directed, non-collaborative tools that rely on the participant completing coursework without feedback or interaction.

While it is often easily accepted that technologies (desktop and Internet applications) can be taught online, there is often resistance to moving so-called "business skills" or "soft skills" to the synchronous environment. Trainers who have been delivering leadership skills, for example, often have doubts about the effectiveness of delivering such dynamic content via the online classroom.

So what can be taught online? To answer this question about a particular program, I suggest looking at the individual learning objectives. (Remember, you create the learning objectives during the design stage of the process, after your analysis has been completed.) After you write your objectives, answer these questions for each individual objective:

1. Is the audience geographically dispersed or co-located?

   If the audience is co-located, then online training may not be necessary. Live classroom programs may be more appropriate.

2. Is the content unstable?

   If the content is unstable and expected to continue to change, developing asynchronous programs may not be economically realistic because of the time and expense involved in programming interactive asynchronous modules. Synchronous programs may still be a good option because you can easily update slides to accommodate new content.

3. Will this program be taught repeatedly over a long period of time or delivered just a few times?

   If you only expect to deliver the content a few times, developing asynchronous programs may not be economically realistic because of the time and expense involved in programming interactive asynchronous modules.

4. Does the participant need to have real-time access to an expert or a trainer in order to learn the content effectively? Why or why not?

   Requiring real-time access to an expert or trainer eliminates asynchronous training from your options.

5. If real-time access to an expert or a trainer is required, can that person teach from a distance? Why or why not?

   There are situations when an expert must be present to demonstrate a skill or a trainer must be present to test a participant. If you can justify why this physical presence is required, then you may not be able to teach that particular objective online.

6. Would collaboration and/or discussion between participants substantially enhance the learning? Why or why not?

   If collaboration and/or discussion would not enhance the experience, you probably have content that is best delivered in an asynchronous environment. Since it is difficult to keep the attention of the synchronous participant, any content that would result in lectures longer than ten minutes should probably be delivered asynchronously. This could mean a reading assignment, a tutorial, or some kind of recording. If collaboration and/or

discussion would enhance the experience, create synchronous events that are supplemented by asynchronous content distribution.

7. Can you test the objectives in an online environment?
   Even if the answers to all of the previous questions indicate the possibility of online content delivery, you need to make sure you can test mastery of the objective in an online environment. You may be able to teach content, discuss problems, and collaborate online, but find a different way to test for mastery.

It is vital that each learning objective be considered individually. The instructional designer should not look at a program from the global level. It may be determined that most of the objectives can be taught online, but one or two could require a different approach. That's when the designer can start to determine the appropriate blend, or mix, of learning technologies for the program.

Applying a Blended Delivery Method

Blending synchronous and asynchronous technologies together is important for several reasons. First, consider that your participants may learn in different ways. Some may need time to process information and review content independently before responding. These participants may enjoy learning in the asynchronous mode. Others may prefer a live approach, in which ideas and feedback can be quickly exchanged. For this group, some kind of synchronous technology may be the most effective. For any instructional medium or program, creating a program that is 100 percent entrenched in one technology or the other can easily disenfranchise some participants. Therefore, online programs should include both asynchronous and synchronous interactions in order to be most effective.

Let's look at a simplified example. Suppose you were asked to design a program that taught new trainers traditional classroom presentation skills. If you made a decision based on just that information, you probably would decide that the content was not appropriate for an online presentation. But let's look at some potential individual learning objectives for this program.

At the end of the program, participants will be able to:

1. Complete a thorough audience analysis;
2. Prepare and organize an effective presentation;
3. Identify effective presentation skills;
4. Use visual aids in an effective manner; and

5. Demonstrate the characteristics and competencies of an effective stand-up presenter.

Objectives 1, 2, and 3 can be easily taught online because the content is stable, the program will probably be taught repeatedly, and the trainer can teach these objectives from a distance.

Objectives 4 and 5 need to be managed differently. Because these objectives cannot be tested in an online format, another way for the participants to demonstrate mastery must be found. Perhaps participants have to gather together to make their final presentations, reducing a potential three-day program to one day. Perhaps a videotape sent to the trainer for evaluation would help to meet this requirement.

Once you have gone through this process, you can make some decisions about how to obtain the right "blend" for your program.

"Nice to Know" vs. "Need to Know" Content in the Synchronous Classroom

When a traditional stand-up program is designed, it often includes content that falls into the "nice to know" category. This is because there is often a surplus of time and the flexibility to make determinations on how to use it. If a particular topic takes longer than expected, the trainer can decide to eliminate some "nice to know" content.

The synchronous environment does not provide that same flexibility. Designers must make sure that all the content in the short synchronous session falls into the "need to know" category. The session should be supported by reading assignments or web pages that contain the "nice-to-know" information; trainers should let participants know how to access these resources and when/why they might decide to use that information.

Distinguishing "Prework" from "Real Work"

No matter how effective and well-designed a prework assignment is, many participants do not take the time to thoroughly complete the work. Often, they don't even review it prior to a learning event. In our training culture there is a tendency to believe that if the content is important enough, the trainer will cover it in class. Trainers often reinforce this behavior by covering the major points for anyone who did not happen to complete the prework.

With blended learning technologies that include short, synchronous events, we (training professionals) need to create a culture in which work assigned outside of live events is completed and taken seriously. We must

migrate from "prework" to "real work," where self-paced exercises are a critical part of the learning process. Trainers simply do not have the time to reteach content that should have been learned prior to the class. Synchronous classroom time should be used for clarification, questions, collaboration, and application—all based on the asynchronous work completed prior to the live event.

This is a huge cultural shift for participants. To accommodate this, designers have to set clear expectations concerning what learners must accomplish before attending class. To ensure completion, trainers may do several things: send out an email message; ask participants to answer questions posted on a discussion board; or have participants email the commentary to the trainer to verify that the asynchronous assignment was completed. If a participant does not complete the verification process, the trainer may decide not to provide the password to attend the live online event. It is critical that organizations implement this culture change early and enforce its guidelines.

One of the benefits of synchronous programs is that, since participants aren't traveling to a classroom, they haven't wasted any time if you tell them they cannot attend a session. Trainers can simply send an email note with a schedule of upcoming sessions and indicate that the participant can enroll for any of them once he or she has had the opportunity to complete the asynchronous portion of the program.

The designers must make certain that, once participants get to the live event, the fact that they have completed the self-directed work activities is recognized. This will ensure that participants feel that every part of the learning process is worthwhile and will encourage them to complete the self-directed work prior to future synchronous events. Knowledge tests, discussions, and verbal acknowledgments early in the live session are all effective ways to reinforce the fact that completing the assignments was a valuable use of time.

Instructional Materials

A critical outcome of the instructional design process is the production of instructional materials. Just because you are using a synchronous classroom as a delivery tool doesn't mean paper materials can be totally eliminated.

Leader guides, participant guides, and slides are examples of instructional materials that should be used to support the synchronous environment. While slides are almost always part of the mix, leader guides and participant guides are often overlooked completely. Trainers depend on the slide content to prompt them through the program, and copies of PowerPoint slides pass as participant materials.

Using Your Leader Guide Effectively

For some reason, when trainers start teaching synchronously, they often decide not to use a leader guide. If you want your online programs to be as interactive and "high touch" as they are in the traditional classroom, using leader guides becomes even more important. Written effectively, leader guides capture the choreography of the program, documenting what the trainer, the producer, the participants, and the technology are doing. Since they are often all doing something different at the same time (sometimes even multiple things!), you should have a detailed plan that explains the design. If you do not, you may discover that your event is much more lecture-oriented than you wanted and that interaction with participants is limited to "yes/no" questions and a few polls.

Optimally, you will be teaching your synchronous classes from some sort of guide or syllabus. These can vary from task descriptions and checklists to detailed scripts. What you should use depends largely on your personal preference; some synchronous trainers find highly detailed leader guides too constraining, while others appreciate the security of explicit scripts. Appendix E provides a sample leader guide, and templates are available on the CD.

CHAPTER 4

(*Note:* For leader guide design strategies, see Chapter 4 of *The Synchronous Trainer's Survival Guide*.)

Slide Design

Since, in most synchronous events, the participants cannot see each other or the trainer, the content on the screen has become the center of attention. It is critical that the slides be designed to keep the attention of the participant. I use the following guidelines when designing slides for synchronous events:

- *Use a white background and leave a lot of white space.* This allows the trainer to scribe on the slides using all of the whiteboard tools without worrying about the colors of the annotations. It also encourages participants to collaborate on the whiteboard if the exercise calls for that.
- *Keep bullets to a minimum.* If there are more than three or four bullet points, use multiple slides. This leaves the trainer more room to write and annotate. It also keeps the participants from reading too far ahead and assuming they understand the content. Remember, it's easy for participants to "check out" and stop listening. Don't give them a reason for it.

- *Make bullets highlighted points, not detailed content.* If there is too much detail on the screen, the trainer will be tempted to just read from the screen, and participants will wonder why they couldn't have just read the slides on their own time.
- *Use the screen for exercises, not content, whenever possible.* Using questions or exercise instructions on the screen gives the trainer the opportunity to engage participants. (Chapter 4, Whiteboard Exercises and Techniques, will provide detailed strategies for how to accomplish this.)

The Importance of Participant Guides

A well-designed participant guide can assist the trainer in facilitating small-group and independent exercises and increase the comfort level for participants not experienced in the synchronous classroom. A sample participant guide can be found in Appendix F, and templates can be found on the CD. (See Figure 1.4.)

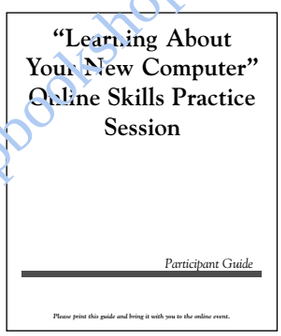


FIGURE 1.4 Participant Materials Are a Critical Component of a Collaborative Blend.

I have found that participants have a more difficult time understanding directions in a synchronous classroom, so it helps dramatically if you incorporate directions to all independent and small-group exercises into a participant guide. Before you have participants start an exercise, explain the directions and direct them to the appropriate page in the participant guide. Also remind them that you will be monitoring the private chat area so they can ask additional questions.

Avoid sending out PowerPoint slides that duplicate your presentation ahead of time. This is a sure way to disengage some of your participants. Many will tend to review the slides on paper and try to listen. If their eyes are on their desks, and not on the classroom, they will not be able to see the on-screen interactions and collaborations and will lose much of the value

of the synchronous experience. Instead of replicating the screens, the participant guide should complement them and help to support class interactions. For example, instead of lecturing for five minutes around three bullet points on a screen, ask the participants to read about them in a participant guide article and then answer questions located at the end of the article in the chat area. Debrief their answers verbally and then move on to the next interaction.

(*Note:* For more information on working with participants in the synchronous classroom, see Chapter 6 of *The Synchronous Trainer's Survival Guide*.)

Assessment

Assessment is a critical component to any training program, delivered traditionally or online. Activities like pre-tests, embedded tests, post-tests, and course evaluations should be as critical to your synchronous program design as they are for your classroom program design. Because direct trainer observation of participants is not available with the loss of eye contact and body language, assessment of knowledge and skills transfer using testing devices may be even more important to ensure that learning actually took place. Use polls and feedback mechanisms throughout the live event to verify that individual points were understood and a final assessment of some kind (test, participant presentation, or follow-up written assignment) to verify that the event was successful.

Design Tips

To conclude, here are some general guidelines for instructional designers to keep in mind when designing synchronous programs.

- *Design in a group environment.* More people often bring more ideas to the table. When it comes to instructional design, the more minds the better! Even a short brainstorming session to review a draft design can improve your program.
- *Chunk and group your learning objectives.* Determine which objectives can be taught synchronously and which objectives require traditional or asynchronous approaches. Arrange these chunks into a blended learning solution using different technologies.

- *Enforce your blend.* Use a mixture of traditional, asynchronous, and synchronous technologies and find ways to ensure participants complete all of the components. Make learning a process, not an event. Find ways to ensure that asynchronous work is completed and valued.
- *Create interactions every three to five minutes.* It is easy for synchronous training to become all about the trainer and a passive experience for the participants. Without something to do every three to five minutes, participants can easily become disengaged. Chapters 4 through 9 provide detailed examples of activities that give participants "something to do." Designers should include timing references in leader materials to ensure that the designs meet this guideline.
- *Break up speeches with exercises and engaging discussions.* If a lecture is longer than five minutes, it is too long. If there is a substantial amount of lecture content, consider asynchronous approaches like reading materials or recordings of some kind.
- *Don't let the tools dictate the design.* It is easy to get caught up in using all of the tools that are available. Be careful because this shifts the focus away from content. Make sure your tools support your design rather than overwhelming it.
- *Find ways to keep everyone busy.* This book contains many examples of exercises that can engage all of the synchronous participants at the same time. This is a critical part of maintaining everyone's attention. When everyone can participate at the same time, you can be reasonably sure they aren't working on unrelated tasks, exercises take less time, and everyone's voice is heard. (Chapter 3 focuses on "synchronous collaboration" and expands on this point in detail.)
- *Include technical instructions, screen shots, and assistant trainer notes in your leader guides.* Remember, you may be designing for trainers who are new to the synchronous environment, and you must support them as much as possible.

(*Note:* For more information on the roles of the online trainer and assistant trainer, see Chapter 2 of *The Synchronous Trainer's Survival Guide*.)

- *Design participant materials; don't just distribute slides.* When participants have access to the exact slides as they can see on the screen, they will tend to look at the printed slides and miss the important interactions that occur in the synchronous environment. Create participant materials that supplement and support the program, but do not replicate the screens.

- *Pilot and revise.* Your exercises won't all work perfectly the first time. You'll need to test them in realistic environments before setting the instructions in stone. (For designers, synchronous deliveries offer a distinct advantage over their more traditional counterparts. Designers can log in and observe just about any class they want, without the time and expense associated with travel. They can also watch recordings of live sessions and use them to evaluate the effectiveness of exercises.)
- *Involve trainers early in the process.* Trainers often have insights into the intended audience's competency levels, access to technology, and tolerance for "games" and other types of instructional exercises.
- *Design with realistic technology expectations.* Instructional designers often have high-end computers on a dedicated internal network and they don't understand how their training will work in "the field."

Well-designed content isn't the only indicator of success. Organizations need to look at the learning environments of participants and make certain they are conducive to success. Chapter 2 looks at motivation, collaboration opportunities, technology, and the online trainer as critical success factors in the online learning environment.