THIRD EDITION

# Rapid Instructional Design

## Learning ID Fast and Right

George M. Piskurich

WILEY

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# Preface for the Third Edition

I find it kind of hard to believe that the first edition of this book came out in 2000, and the second edition in 2006. In those fourteen years, and even in the last six, so much has changed in the field of instructional design. Delivery systems that were the gold standard when the first edition was published have almost disappeared, others that were barely on the cutting edge are now not just normal everyday deliveries, but required knowledge for instructional design (ID), and still others that weren't even a ghost of a whisper when the second edition came out are now mainstream enough to be at least a possibility in the ID tool kit.

Yet, even with all these changes, the basics of instructional design remain. ISD and ADDIE have been challenged more times than I can count in those fourteen years by various methodologies and their associated acronyms that have appeared, flourished for a time, then died away as designers went back to what they knew worked. Today we have AGILE and SAM, both of which have very strong and useful conceptualizations going for them, but that are, in the end, based on the tried-and-true ISD concepts of analysis, design, development, implementation, and evaluation.

That being said, why a third edition of this book? Well, first, those prickly new delivery systems need to be addressed. They range from the somewhat simple concept of flipped classrooms to the mysteries of "the Cloud" and what it means to the designer. In between is the philosophical concept of "social network based learning," and how you use it, control it (if that's possible, and

if you really want to) and how to design for it. So this edition will discuss these concepts as they affect the designer, at least as much as we can, considering that they are so new that there hasn't been all that much practical application done with them yet.

Second, some of the templates and figures needed a bit of revision, as time and the discipline have passed them by. I'm afraid I went a bit overboard on this, as you'll find over twenty-five new templates, checklists, and figures in this edition, ranging from a checklist on how to design a field trip to a new blended learning evaluation instrument.

And finally, there was a need to correct some mistakes (as those who have been using the first and second editions have been telling me) and rectify some omissions, such as planning for communicating and marketing programs, and the important task of training facilitators to facilitate.

We also took the instructor's guide out and put it online, so the book is not quite as hefty (although it won't be as good a doorstop) and to make it easy for you to download and use the templates and such.

So here's hoping this edition continues the purpose of the previous two in helping to make you a better instructional designer, and doing that more effectively and efficiently, as any good instructional design should.

— George

# Introduction

## PURPOSE

The purpose of this book is to consider how to make both the learning and doing of instructional design faster. Proper instructional design is an absolutely critical, but very time-consuming, aspect of any training process, so finding techniques to do it right—but rapidly—is important, and the benefits of employing these techniques are pretty obvious.

This book covers all the basics of instructional design, from analysis to evaluation, and perhaps just a little more, but does so without the theory, with plenty of practical checklists, and with many hints on how to design better and more quickly in this age of technology-based training.

Some might say that in dealing with basic instructional design this book is treading on much furrowed ground. Although this might be the case, we will be using a somewhat different type of plow; and perhaps it is time to revisit that ground, particularly from a new perspective.

At a recent international training conference exposition, I took a tour of the various publishers' booths and asked for books on instructional design. There weren't many to choose from, and most of the ones I did find were based on this or that new theory of learning. It seems that the most utilized and recommended basic instructional design book is still Dick and Carey's (1990) *The Systematic Design of Instruction*, which, even in its third edition, is ten years old.

By no means am I suggesting that this book should or will replace Dick and Carey; the focus, audience, and tone are all very different. However, the intent is pretty much the same: to discuss the most effective methods for designing instruction, albeit in this case, how to design more rapidly.

Instructional design is a difficult topic to write about at best. It seems that no matter what you say or how you say it you'll miss the mark for someone. You'll be too theoretical for some, yet not theoretical enough for others; too simplistic in your explanations or not basic enough; too focused on the needs of the new designer, or the needs of experienced practitioners; and what about the "sometimes designer"; and so on.

Add to this quandary the concept of *rapid* instructional design with questions such as: What can you skip in the design process? What had you better *not* skip unless you truly know what you're doing? Can it be rapid and still be right?, and you're simply asking for more trouble. So what can I say except, "We're asking."

## AUDIENCES

The concept of rapid instructional design means different things to different people, and therefore there are a number of intended audiences for this book.

The first and perhaps foremost are those I term *occasional* designers. These are individuals who, because of their subject-matter expertise, are called on to train others from time to time, and not just to "do" the training, but to create it. For you, this book will present a basic instructional design methodology that will help you to create effective training. By "effective" we mean training that meets the needs of your trainees and of those who assigned you this task. The process will be rapid because we've left out the theory and provided numerous checklists to help you through the process.

The second audience is those individuals who, without really planning it or in most cases being prepared for it, have become training professionals. I've met many of you in my wanderings. Sometimes you're assigned to a training position for a year or two as part of your career development or because the company needs you there. Others have been excellent occasional trainers who for one reason or another find themselves permanently assigned to a training function, or who become personally responsible for all the training for their work groups.

What you all have in common is that you want to do a good job, but you need the right tools. This book will provide you with those tools—everything from analyzing your work group or company for training needs to evaluating programs to make sure those needs have been met—and all the design and development required in between. Once again, we'll do it rapidly, with minimal theory and maximum practical information in the form of hints for doing what needs to be done better and faster.

The third audience is comprised of those who need to know about instructional design but are not, and probably never will be, practitioners. This includes managers and administrators who must make decisions about

what training their work groups require and how to do it most efficiently, human resources professionals who need to understand a bit about instructional design as part of their job responsibilities, and my sales colleagues in training and consulting organizations who are responsible for helping their clients understand what this instructional design "stuff" (particularly new technology training) is all about.

The final audience is seasoned practitioners who are looking for rapid methods for doing instructional design. We will not be exploring these concepts in detail in this book, but we will recognize and discuss them. We'll explore how they fit into the basic instructional design process, both as we encounter them, and in the last chapter.

## SPECIAL ELEMENTS

To deal with these various audiences and their varied needs, this book has some special elements in it. One of the most obvious is the icons. There are two basic types of icons that you might see at the beginning of a section or sub-section. The first is a  . This means that this area is *not critical for an occasional designer*. If you are a reader who is basically a subject-matter expert asked to design and teach a specific course, when you see the  icon you can probably skip this section with no harm done. It's not that the concepts discussed in these sections are not important to instructional design, it's just that because you are designing a single course for which you are the expert, the topic has been decided on, and no one will teach it but you, doing everything in these sections would be overkill, or not particularly useful for you. Remember, we are affecting *rapid* instructional design here, so you should only do what you really need to do for your training situation.

This process is called *situational instructional design*, and we could fill the entire book with all the various instructional design situations and what you should do in each. However, for the sake of creating a book that might be read, instead of one that makes a great doorstop, we'll only deal with this one general situation as it relates to one of our chosen audiences. Once again, if you are a subject-matter expert, designing and instructing for a topic that has been assigned to you, you can skip the areas marked with a  .

You'll also find areas marked with the  icon without a slash. These are areas of *special interest to you as an occasional designer*. Most often they will be places where we'll tell you how you can shortcut the concept we are discussing, due to your particular situation.

The second type of icon is an  . A  means that the information following is a rapid design *shortcut*. This is mainly for readers who are seasoned practitioners, to help them find the rapid design aspects of the book without reading through a lot of what they already know. It does not mean that those

readers who are in our other audiences should not read these pieces; there is almost always some useful information in a section for everyone. However, using the rapid techniques might not be the best approach for an inexperienced designer.

For our other audiences, you should be able to utilize just about everything in the book somewhere along the line in your instructional design processes.

A second special element, besides the icons, is the recommended resources. Each is what I consider to be the best book, magazine article, or website for further information on the topic. You'll find them in every chapter whenever I have a recommendation for a new topic or concept as it's introduced. These resources are mainly for those readers who need to know more, such as those of you who have just taken on full-time training or training management responsibilities. The full references are provided at the end of the book, within sections and alphabetical by title.

Now I don't want to start a big controversy with my recommendations, so please note that these are only my opinions, and only in relation to the specific audiences we just discussed. Please don't call, write, or e-mail asking why I didn't choose such and such, or how could I have missed so and so. I'll be more than glad to hear from you concerning nearly anything else in the book, or instructional design, or training in general.

Another special element is the *hints* at the end of some of the chapters. One of the difficulties in talking about instructional design is that sooner or later you get off on tangents, particularly when you begin to discuss delivery systems. As we wanted to make the basic information in this book as simple and straightforward as possible for the new or occasional designer, we took many of these "branches" and simply made bulleted lists for them, included in the hints area. Some of these lists are pretty extensive, particularly when discussing media formats, but don't forget that they are resources, not intended to be read as a list. Refer to them as required for your needs. Simply reading through them will not be particularly effective.

There is also a Glossary. The definitions there are a combination of ones that are more or less accepted and others that are simply practical. Some are mine; some are borrowed in part or whole from others. We'll note within a chapter when a certain usage might be more relevant for this book. However, the Glossary goes well beyond this to explore a number of possible terms and definitions. For example, we'll use "trainee" rather than "student" and "trainer" instead of "instructor" in most cases in this book, but you'll find all of these terms in the Glossary.

The Suggested Readings at the end of the book are exactly that, not references or a bibliography. They are divided by topical area to make it easier

for you to use, although some books tend to spill over into a number of topics. They are alphabetized, not prioritized.

The Other Resources listing at the end of the book contains mostly websites that have information on the various topics and some pointers to periodicals or groups that can help you if you need to explore a concept in greater detail, or if you just like electronic communications better than print.

## ORGANIZATION OF THE BOOK

The problem with organizing any instructional design book is that the instructional design process is not what it seems, or at least not what most people make it out to be. It is not a simple linear method that starts with analysis and moves on through stages to evaluation, even though that's what you see in most models. Instead, it's more like a connected circle with the end feeding back into the beginning, or even a web with all of the aspects interconnected and leading to parts of each other.

But because a book is linear, the organization of instructional design herein will be as well, using the tried-and-true five-component design model of analysis, design, development, implementation, and evaluation. We'll start with a basic introduction and some thoughts on why instructional design is important. Don't get this "why" confused with theory. I think it's important here and there to have a brief discussion of *why* you want to do certain aspects of instructional design, particularly the process as a whole; but we won't be looking at the theory behind the why, just the practical necessity.

Believe it or not this is a good place for the first of those rapid design hints we just discussed. Because instructional design is like a web, you don't have to complete all of one component before moving on to the next. For example, you may choose to begin developing some of your training material even as you're finishing the analysis component. You may need to do a little rewriting at the end, but the majority of what you do will be fine, and you won't have wasted time waiting for all the analysis data to be in before moving on.

Chapter 2 deals with what might be termed pre-design activities, that is, things that need to be done before you actually begin to design your program. This includes concepts such as training needs assessments, performance assessments, and cost/benefit analysis. If you're an occasional designer, most of Chapter 2 will be less important to you; whereas if you are newly in charge of a training function, the information here will be critical. Follow the icons and use your own situation as your guide.

Many experts would say that Chapter 3 is the real beginning of instructional design, the component known as analysis. Of course, just as many would say that Chapter 2 is the real beginning, as much of what we accomplish there feeds into analysis. Anyway, we'll look at the various types of analysis, what

they are used for, and the methods for doing them. There are a number of them and all are important, although some will be more critical than others, depending on your particular situation.

Chapter 4 is a very long chapter because it deals with a number of critical design issues. We start with another analysis that determines what delivery system will be most effective for your training tasks and your organization. This in itself is controversial, as some designers balk at deciding on a delivery system before writing objectives and content. However, with all the technology variations that are available for delivering training today, and their associated cost in both dollars and time, we feel that a delivery decision is a critical early step in the design component.

We'll move from there to objectives, design documents, test questions, and instructional plans to complete the design component. This is actually a more-or-less random stopping point for Chapter 4. Some of these concepts could just as easily fit into the delivery component, while others interrelate so much that it is hard to tell where they go, but we had to stop somewhere.

Chapter 5 is the delivery component, which is concerned with the actual development of the training materials. We follow a lesson plan format here. Even though lesson plans are basically a classroom delivery product, they make a good outline for on-the-job training (OJT) and for technology-based training (TBT) as well, which covers most of the other major delivery systems. We discuss openings, motivation, activities, summaries, and some evaluation aspects.

Because development is the component during which you add media, the hints section is pretty formidable here. We cover ideas on everything from flip charts to satellite-mediated broadcasts, with plenty of attention on the technologies such as multimedia and net-based training. (*Note*: There is a lot of terminology flying around concerning the process of Internet, intranet, and web-based training. In this book, we will use the term *net-based training* to mean any type of training for which a computer network is the delivery system. This might include intranets, Internets, and webs. If there is a particular reason for focusing on one of these processes over the others it will be called out specifically.)

Chapter 6 is concerned with program implementation. However, it begins with information on pilots and beta testing. Once again, some would say that this material belongs with evaluation (Chapter 7) or even development, as—like many instructional design activities—it has a lot of connections to both. We chose the implementation connection, as this is the first time you'll actually see your training implemented. Chapter 6 continues with some general concerns; and the hints section contains ideas for various types of implementations.

Chapter 7 deals with evaluation, both evaluation of the trainees, which is discussed in various other chapters as well, and of the training program itself. Reasons for doing evaluations, what might be evaluated, and how to evaluate are covered, as well as evaluating self-instructional programs, which requires a somewhat different approach. Thoughts on revising programs and program materials end the chapter and bring us back full circle to analysis, which is the end product of evaluation.

The purpose of Chapter 8 is to provide you with a little more detail on a number of rapid design techniques. This chapter is more for the experienced designer, but the concepts may be interesting to all readers. These short discussions are not meant to make you an expert on these methods, but rather to supply you with enough information to decide whether they are useful for you, and with the suggested readings, to send you on your way to learning more about them.

Chapters 9 and 10 consider the design of two newer and widely used delivery systems, asynchronous and synchronous e-learning.

Chapter 11 considers some of the newer technology and delivery concepts that have come into use since the first edition was published.

As we noted earlier, instructional design, particularly rapid instructional design, is not an easy concept to discuss. It is highly situational, often depending on the level of knowledge of the designer, the organizational environment, the needs of the trainees, the responsibilities of the trainers, and other even less tangible things. We hope that this book will help you deal with these complexities and make your instructional designing the best, and fastest, it can be.

# Chapter 1

# What Is This Instructional Design Stuff Anyway?

*This chapter will help you to*:

- Discover why you need instructional design
- Begin to see what instructional design is
- Consider the advantages and disadvantages of instructional design

There is an old saying that if you don't know where you are going, any road will get you there. This is a fine philosophy if you are spending the summer between your junior and senior year "experiencing" Europe or if you have embarked on an Australian "walk-about," but when you are developing training programs it leaves a lot to be desired.

One of the purposes of instructional design is to provide both an appropriate destination, and the right road to get you there, whenever you are responsible for creating a training program. Your destination is usually some form of learning that your trainees will accomplish, while the road is one of the many paths that instruction can follow to facilitate that learning.

Instructional design stripped to its basics is simply a process for helping you to create effective training in an efficient manner. It is a system, perhaps more accurately a number of systems, that help you ask the right questions, make the right decisions, and produce a product that is as useful and useable as your situation requires and allows.

Some people refer to instructional design as the "science" of instruction because it follows a set of theories and methods and is concerned with inputs and outputs. Other people see instructional design as an "art" because the best designs usually have a direct relationship to the creativity and talent of

the designer. Still others see it as "a good thing to do if we have the time," but it can't get in the way of producing the training.

How you see instructional design is up to you. In this book we will not champion one view over another, or even one definition as the "most correct." What we will do is try to convince you that creating a training program without using instructional design principles is inviting failure. Once that is (we hope) accomplished, we will explore the most basic of those principles, not from a theoretical point of view, but rather from the direction of how to apply them, rapidly and successfully.

In fact, if you are seeking instructional design theory you've probably come to the wrong source; you may want to read Dick and Carey's *Systematic Design of Instruction* (1990). One of those basic instructional design principles we mentioned is to *know your target audience*. This book's target audiences were described in the introduction. Primarily, they are individuals with little to no instructional design experience who need to learn to do it right, but fast. For the most part you are not permanent training professionals planning to make a career out of instructional design, so the theory is not as important as the actual practice.

Our audience analysis (we'll be talking a lot more about analysis in the next couple of chapters) tells us that you are much more preoccupied with *how* it is done than with what is behind the doing. Not that you aren't interested in the theory, but you just don't have the time to explore these aspects when everyone is expecting your training program yesterday. So terms such as adult learning theory, learning styles, and even cognitive science may appear here from time to time, but we won't be discussing them in any detail. We will spend most of our time considering how to apply good instructional design principles specifically to the various ways you can deliver training, such as classroom training, on-the-job training, self-instruction, and technology-based training.

However, for the more experienced practitioner, we'll also discuss ways to speed up the instructional design process through simple hints and larger scale methods, such as instructional design software, learning object-based design, rapid prototyping, and performance-support-based design. If you are an experienced instructional designer, or plan to be someday, you might want to at least check out the shortcut icons and hang around for Chapter 8 to pick up some new ideas and shortcuts.

## WHY INSTRUCTIONAL DESIGN?

So why should you concern yourself with instructional design? Perhaps the best reason I can give is one we've all experienced: the course, class, seminar, or other training event that sounded good on paper, but that you left (and that left you) wondering why you ever came. There are a number of reasons for

this universal phenomena, but in the end they all boil down to one cause: *poor instructional design*. Did the class not meet the objectives stated in the course description? Poor instructional design. Did the test at the end of the program not make any sense? Poor instructional design. Did the instructor meander from topic to topic with no clear pattern to what was being discussed? Poor instructional design. Was the material over your head, or too basic—blame it on poor instructional design. (OK, I admit there may be other reasons as well, but poor instructional design is often the most critical reason, and because this is a book on how to become a better instructional designer, allow me just a little overstatement.)

On an individual basis, these ineffective learning experiences are annoying, but when considered for a company-wide training course it is rather painful, particularly to the bottom line; and multiplied by five or a dozen or fifty training courses, it is appalling. Hundreds of thousands of precious training hours are wasted every year telling participants what they already know or things they cannot use.

The cost in wasted time, wasted money, and wasted opportunities is staggering—all because the person responsible for the program did not know, or did not take advantage of, a few mostly common sense rules for creating good training.

ASTD notes in their *2013 State of the Industry Report* that over one and one-half billion dollars was spent by organizations on training in 2012. If even 5 percent of this expenditure was made on bad training because of poor instructional design (and chances are the real amount is well over that), knowing how to do it right would have saved companies over $75 million!

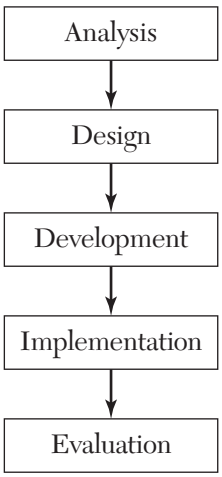
What instructional design will do for you, the training course developer, is to help you guard against making such mistakes. It will help you create good, clear objectives for your program that can be understood and mastered by your trainees. It will help you develop evaluations that truly test for the knowledge and skills that your objectives are based on. It will help you or whoever instructs the course to facilitate the participants' learning effectively and efficiently and, most important, it will help you make sure that what is in your program is what your trainees need to learn. This reduces wasted time, wasted money, and wasted opportunities for helping to develop more effective employees who, through their knowledge and skills, increase corporate profitability.

## WHAT IS INSTRUCTIONAL DESIGN?

Earlier we discussed instructional design in generalities: a science, an art, a way to create training. These are all fine concepts, and perhaps good definitions, but instructional design is really a *set of rules,* you could say *procedures,*

for creating training that does what it is supposed to do. Some of those procedures have to do with finding out *what* the training is supposed to do (you might call it determining the goals of the training), while other procedures deal with letting the participant know what those goals are. Still other procedures ensure that everything in the training focuses on those goals, and one more set monitors how we know that the goals have been achieved.

Instructional design is a way to plan your training program from the moment you have the idea for it (or the idea is given to you) until the moment you complete your revisions of your first effort and get ready to run the program again. It is a working model that you can use to manage the concepts and tasks that are part of a successful training process.

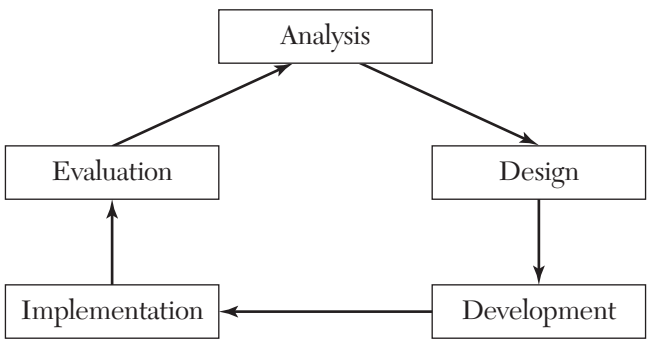



**Instructional Systems Design Straight Line Model.**

There are many ways to do instructional design, probably about as many as there are good instructional designers, but each way follows the same basic principles, and it's those principles that we will explore here. No matter whether you are training technicians, service workers, or managers, or whether you will be utilizing classes, on-the-job training, e-learning, or satellites, you will need to use these principles in one form or another to make your training a success.

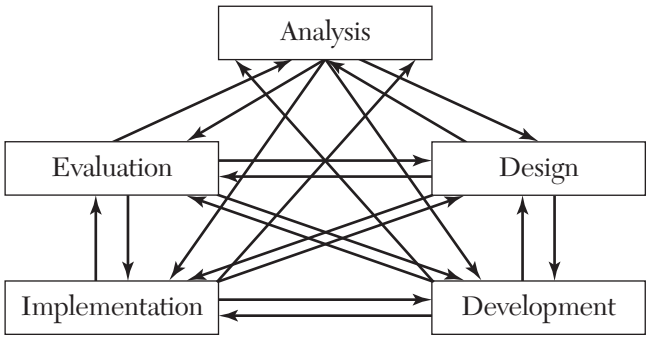
Those principles were developed by the military in the 1940s, and set down as a method of instructional design called Instructional Systems Design or ISD. The graphic on the left depicts the ISD process with its five phases of Analysis, Design, Development, Implementation, and Evaluation.

As time went on, designers began to realize that, while the phases were a pretty good representation of how instructional design worked, the straight line model with a beginning and an end was not realistic. Evaluation usually led to more analysis, which created the need for re-design, and so on. So we began to look at ISD like this:




**Instructional Systems Design Cyclic Model.**

However, to confuse you a bit, and because it mirrors the reality of ISD as an iterative process in which we keep making and re-making decisions all through the five phases as we create our design, I offer you my rendition of the ISD model.




**Instructional Systems Design Spiderweb Model.**

I affectionately refer to this as the ISD spider web model, and challenge you that if you can recite an instance for each of the arrows in which you would move from one phase to the other, then you probably don't need to continue reading this book.

In the final analysis, instructional design requires only specific behavioral outcomes, a way to measure them, and reviews and revision to make sure the training effectively covers the outcomes. Everything else is just icing on the cake, though as all of us with a sweet tooth know, the icing is what makes the cake.

Here is an overview look at some of the major aspects of that icing. It doesn't exactly follow how we'll discuss instructional design in this book, but it gives you a good idea of the complexities of the process.

## A FEW DEFINITIONS

Before we get into the advantages of instructional design, we'd better take some time to develop a couple of definitions. An *instructor* (as we'll use the term in this book) is the person who stands in front of a class or a person and performs the main role of disseminator of content information. There is obviously a lot more to training than just that, and—as we all know from sad experience—there are instructors, and then there are INSTRUCTORS, but for now let's just leave it there.

The term *facilitator* is meant to also describe an individual who stands up before others in a training setting, but whose main role is to assist in helping them to learn, rather than to disseminate content information. This is not to

**Possible ISD Activities and Outputs**

| Plan | Analyze | Design |
|---|---|---|
| **Goals** | | |
| • Leaders consulted to determine needs based on business objectives<br>• Learning opportunities linked to business needs<br>• Plan created | • Learning solutions that match performance needs identified and analyzed | • Completed design document for the learning intervention |
| **Key Activities** | | |
| • Identify strategic business objectives<br>• Identify KPI's and how they are measured<br>• Produce a performance analysis<br>• Confirm relationship of business needs to performance gaps and underlying causes<br>• Identify learning and non-learning needs<br>• Conduct a high-level curriculum assessment<br>• Estimate cost, scope and resources of possible learning interventions<br>• Prioritize interventions<br>• Create overall plan | • Perform a gap analysis/root cause analysis<br>• Analyze target audience, job, tasks, and performance<br>• Decide on preliminary design solution<br>• Refine costs, scope, and resources required<br>• Create preliminary project plan<br>• Define needs for project team, vendor, and stakeholder interaction<br>• Create evaluation strategy with emphasis on KPIs<br>• Contract possible vendors if needed<br>• Kick-off meeting | • Formulate learning objectives<br>• Finalize design solutions and delivery<br>• Create design document<br>• Hold SME meetings<br>• Create draft plans for<br>  ◦ Implementation<br>  ◦ Evaluation<br>  ◦ Communications |
| **Key Outputs** | | |
| • Strategic leadership meetings<br>• Performance analysis<br>• High-level analysis document<br>  ◦ Identification of applicable KPIs and measures<br>  ◦ High-level budget<br>  ◦ Probable delivery system<br>• Curriculum assessment report | • Project plan<br>• Learning needs analysis document<br>• Other analysis documents as required<br>• Resource requirements<br>• Evaluation strategy<br>• Vendor contract | • Updated project plan<br>• Design document<br>• Preliminary course roadmap<br>• Implementation plan<br>• Content outline<br>• Evaluation plan<br>• Updated budget<br>• Communications plan |

| Develop | Implement | Evaluate |
|---|---|---|
| **Goals** | | |
| • Learning materials complete and intervention ready to pilot | • Intervention piloted and delivered | • Course applicability confirmed<br>• Performance improvement verified<br>• Course improvement opportunities determined |
| **Key Activities** | | |
| • Create prototype if required<br>• Develop content and deliverables<br>• Conduct ID quality review<br>• Determine facilitator requirements<br>• Select and train faculty<br>• Technology readiness and testing<br>• Finalize implementation plan<br>• Conduct and evaluate beta tests<br>• Develop evaluation reports<br>• Determine review and revision parameters | • Pilot and pilot review<br>• Plan schedule of offerings<br>• Begin communications<br>• Engage business in implementation<br>• Launch program<br>• Deliver program<br>• Launch evaluation plan<br>• Transition to continued implementation process | • Assemble evaluation data<br>• Review evaluation data<br>• Determine course applicability<br>• Determine impact on performance<br>• Determine changes in KPIs that might be related to training<br>• Identify business improvement opportunities suggested by evaluation data<br>• Identify improvement required |
| **Key Outputs** | | |
| • Completed course roadmap<br>• Storyboard<br>• Facilitator strategy (selection and training)<br>• Final course materials<br>• Beta tests<br>• Maintenance plan<br>• Program documentation<br>• Quality reviews by ID | • Pilot review<br>• Course schedule<br>• Communications<br>• Launch | • Evaluation reports<br>• Evaluation analysis<br>• Improvement recommendations |

say that an instructor doesn't assist in learning, or that facilitators don't provide content information at times, but these aren't their main responsibilities. Lectures are given by instructors; classroom simulation or role-play activities are expedited by facilitators. Instructors almost always have to be content experts; facilitators do not.

We'll use the term *facilitator* often in this book, as this is the role a good designer tries to design for, even if he or she throws some instruction into the mix. We'll use the term *trainer* to mean a facilitator as well. For example, an on-the-job training (OJT) trainer for our purposes will be basically a facilitator, even though he or she may occasionally provide some content information.

A *designer* is the person who puts the training together for the instructor, facilitator, trainer, or whomever. Often the designer is also the trainer; just as often he or she is not. If the designer is the trainer, this makes instructional design simpler and more treacherous, as trainer/designers tend to take a lot of liberties with the instructional design process, knowing they can deal with any shortcomings "on the fly" during the class. If the trainer and designer are not the same person, then instructional design is more difficult, but normally less inconsistent, as the designer needs to spell everything out in detail for the trainer if the training is to be done right.

The designer's function can be broken down into lots of sub-functions, such as material developer, evaluator, writer, artist, and so on, many of which theorists would argue have nothing to do with "true" design. However, as I mentioned earlier, we will not deal much with theory in this book, so for simplicity's sake we'll group all these functions under the designer role.

Another role is that of *subject-matter expert* or SME. An SME is, as the name suggests, a person who, mainly due to experience, knows a lot about the content to be taught. A designer will team with an SME to help in the development of content and for review purposes. A trainer or facilitator may consult an SME concerning thorny issues in the content, or just to get some good ideas to use during the class, some "examples from the trenches."

In far too many cases in training, people who are SMEs are given the role of designer or trainer or both, simply because they are SMEs. They may know little about how to put training together—and even less about how to run an effective training class—but because they have expertise in how to do the job, they're elected, appointed, or volunteered. They usually teach what they think is important (and it often is, although it may not be everything needed or important for this particular audience). They tend to teach it the way they have been taught, or the way they are most comfortable learning (which may be wrong, or at least not effective for the content or the audience). In other words, they are very often not practitioners of good instructional design.

If you find yourself in this predicament, please don't feel that we are criticizing you. We are definitely criticizing the people who put you there, but it certainly isn't your fault that you've been told to do something you have not been trained to do. No one would ask you to drive a bulldozer or fly an airplane without the proper training, but this does not hold true for training. Books such as this one can help SMEs become good designers, and there are other books that will make them better facilitators. (See Bob Pike's *Creative Training Techniques*, 1994.) But SMEs are *subject-matter experts*, and that does not make them facilitators or designers.

If you are in this circumstance, take heart. As the old saying goes (slightly paraphrased), "The fact that you are here and recognize that you have a problem means the situation is not beyond hope." An advantage of instructional design is that it can help make SMEs into good designers.

## ADVANTAGES OF INSTRUCTIONAL DESIGN

Now, on to advantages. The main advantage of instructional design is simple: it assists you in correctly doing what you need to do. In the case of developing a training program, this means creating training that helps your trainees learn the things they need to know. This sounds pretty obvious, but that doesn't mean it always happens.

Frequently, when developing training, the trainer, who is often charged with designing the training as well, makes the decisions as to what the trainees need to know based on his or her experience and the amount of time he or she has been given to deliver the training. These may be accurate guesses or not, but invariably in such an approach some aspects—at times critical ones—are missed or deleted due to time constraints. The advantage of instructional design is that it does not rely on one person's concept of what the trainees need to know, and so it is more likely that the final product will be the right one.

We can take this advantage even further when we consider not just what is in a program (often called the *content*), but the program itself and the other programs that make up a training curriculum. Someone must decide who needs to take what courses and how many of them. Instructional design procedures make this overall decision more systematic and thus more accurate.

### Cost-Effectiveness

Ensuring cost-effective training is another advantage of using instructional design. One way it does this is obvious. If you are training people on what they really need to know, and not just what someone thinks they need to know, then you are wasting less training time and, in this case, time is truly money.

It costs a lot of money to run training programs. Some estimates put the cost of private training in the United States alone at over $58 billion a year!