

IN THIS CHAPTER

- » Getting to know the instructional design process
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- » Recognizing different types of instructional design models

Chapter **1**

Introducing Instructional Design

Do you want to create educational materials, lessons, or workshops? Instructional design offers you a process for developing instruction that is rooted in principles of how people learn. Chances are, you have experienced both successful and unsuccessful instruction at some point in your lifetime. Although there are likely a number of reasons for your unsuccessful experiences, poor instructional design is likely part of the cause. The benefit of instructional design is that it gives us a process to follow to create educational experiences that lead to more successful outcomes for learners.

This chapter gives you an overview of the instructional-design process and profession. You find out how to proceed with a design process that takes you through the early steps of analyzing the need for the instruction, designing goals and activities, creating and trying out the instructional materials, and evaluating whether the instruction was successful.

What is Instructional Design?

Instructional design is situated within the field of education because its primary focus is to help people learn. At its most basic level, instructional design is both a profession and a process for creating effective instructional experiences.

The field of instructional design is described as both an art and a science. Design itself is a creative act that draws on the imagination of a designer, teacher, and/or content expert. It is also a science because it is rooted in research and scholarship from several overlapping fields, such as the educational sciences, information sciences, and communications.

Instructional design is defined simply as a systematic process of planning and creating instructional materials, activities, and technologies that support learning. Professionals in instructional design work in a variety of settings such as corporate organizations, higher education, or other educational spaces such as museums or libraries.

Instructional design as a field is also commonly referred to using different labels that reflect slight differences in focus:

- » Instructional design
- » Instructional technology
- » Educational technology
- » Learning design
- » Learning technology
- » Learning experience design
- » Training design
- » Curriculum development

Although the previous labels are slightly different from each other, each of them has a common focus on both education and design.

This book uses the term “instructional design” as it has the broadest application and is a longstanding term used to describe the field. Due to advances in technologies that make them easier to use, create content, and connect learners virtually, instructional technology has become more of a central focus to the work of instructional designers.



EXAMPLE

Here are a few examples of instructional design:

- » Designing training programs for new employees to introduce company policies, regulations, compliance, or job practices
- » Professional development workshops for employees to learn new skills
- » Educational workshops for families visiting a library or museum
- » Patient education about disease management
- » Military training for equipment operation
- » Video instruction on how to use new technology
- » Online instruction for students taking college classes from a distance
- » Exercise videos with demonstrations

These are just a small number of examples that illustrates the range of use of instruction for learning across multiple settings. In the next few sections, I explore what it is like to be an instructional designer as well as the benefits of using instructional design.

Knowing what is involved in the instructional design process

Instructional design uses a systematic process for designing instruction, which means that it uses research and theory on how people learn to help you plan effective instructional materials, activities, and assessments. As a systematic process, it translates principles of teaching and learning into structured, organized procedures that an instructional designer follows to determine the purpose of the instruction, what should be taught, how it should be taught, and if learning has occurred. Each step involves a series of planned actions that an instructional designer follows to achieve a particular instructional goal.

What are some of the different elements of the instructional design process?

- » **The instructional setting.** A key part of the instructional design process is analyzing the context and need for the instruction. This typically involves figuring out what problems exist and clarifying if instruction is the best solution. For instance, a company can have a performance problem, such as excessive error rates from technicians, or an organization is introducing a new technology that requires employees to be trained to use it. Instruction is a good solution for problems that involve a need for new knowledge, skills,

attitudes, or practices. Having a clear understanding of the organizational context, resources, and constraints is essential for all phases of the design process.

- » **The learners.** The instructional design process hinges on understanding who the learners are, their motivations, what knowledge and skills they already have, as well as any accessibility considerations. Instruction is more likely to be effective when you seek information about your learners and tie your instructional goals and activities to your analyses of both the learners and the instructional context.
- » **The type of instructional goal.** Instructional goals are classified into different types, ranging from remembering facts to creating new ideas and innovations. The instructional goal drives decisions about what types of activities and content to use in the instruction. It should also be aligned with the organizational context and need for the instruction.
- » **Technologies and materials for delivering the instruction.** Instruction is delivered to learners using a specific approach — such as an instructor leading a training session in a classroom or as part of an online webinar, or learners working with videos and/or print-based materials. Our selection of materials and technologies is tied to our learning goals, characteristics of the technology, and the logistical resources and constraints of the instructional setting. Making decisions about using a specific technology needs to be considered in concert with all other instructional elements.
- » **Instructors and subject-matter experts (SMEs).** Another critical part of the instructional design process is the instructor or subject-matter expert. *Instructors* are the experts who are responsible for teaching the instruction, either in the classroom or online. They have direct interaction with the learners during the instruction. Subject-matter experts (or SMEs) have expertise in the content of the instruction, but they may or may not be instructors of the course. SMEs work with an instructional designer to determine what ideal performance looks like and to develop the content of the instruction.

Recognizing the benefits of instructional design

Instructional design offers a variety of benefits to both learners and stakeholders who are involved in the instructional process. You can see the importance of instructional design in the following outcomes:

- » **Learning effectiveness.** One of the most important benefits of instructional design is that it provides a structure for you to develop instruction that helps

your learners accomplish what they need to learn. The instructional design process focuses at the outset on what the learner will be able to do after the instruction ends. By first aligning goals and outcomes and then designing instruction to line up with these goals and outcomes, you can determine if the instruction's objectives were achieved. The instructional design process provides a framework to help you choose the most effective strategies and technologies to meet your goals.

- » **Potential cost savings.** Although instructional design can have upfront costs in personnel and technology to design, develop, and deliver instruction, its potential payoff lies in the benefits of having effectively trained learners. This payoff can result in an increase in productivity, a decrease in errors, or an increase in customer satisfaction. Having well-designed instruction may also produce intangible benefits such as employee satisfaction due to an organization's commitment to high quality professional development and career advancement. It can also spark new interests as well as a commitment to lifelong learning.
- » **Consistency and reliability.** Instructional design is based on a systematic process that leads to the development of instruction tied to specific goals and objectives. After the instruction is designed, it can be used again on multiple occasions with different learners, with the reassurance that learners will experience a consistent instructional product. For instance, an instructional video created to teach learners how to use a new software program can be deployed over and over with multiple learners using the same well-designed instructional materials.
- » **Team oriented.** Whereas instructional designers do sometimes work on their own as the sole content expert and instructional designer on a project, instructional design is often a team effort. The steps involved in the design process usually direct instructional designers to collaborate with multiple individuals such as a design team, learners, clients, or stakeholders. This process is beneficial because it helps ensure that the instruction being designed is aligned with the overall goals and needs of the organization and learners. (As an added benefit, it draws on multiple areas of expertise, ensuring that multiple perspectives are incorporated into the final design.)
- » **Continuous improvement.** Another advantage of the instructional design process is that it helps a designer assess whether learning has occurred and if the objectives of the instruction have been met. By measuring the learning outcomes at the end of the instruction, a designer can revise the instruction and continue improving upon it by focusing on those areas where it is not working as well as anticipated. In this way, the instructional design process is cyclical and leads to continual improvement of the instruction after each implementation.

» **Expertise in learning and design.** The instructional design process moves a designer beyond content presentation to the creation of activities and strategies that support deeper learner engagement. In the age of AI, anyone can produce content and put it into a slide deck, a document, or a website. However, instructional designers have expertise in how people learn as well as how to design instructional activities that lead to learning. Knowing how to design effective and motivating activities that support active (versus passive) learning is a needed skillset in today's instructional settings.

Looking at the Life of an Instructional Designer

Instructional design is both a process for creating effective learning experiences as well as a rapidly growing profession. Instructional designers work in a variety of settings such as designing training for corporations to designing eLearning (online) courses for college students in higher education. These are just a few examples of the kinds of work that instructional designers do.

The following sections describe the life of an instructional designer, including where they typically work, what type of work they do, and how you can get started in a career in instructional design.

Where you find instructional designers

You find instructional designers at work in many different types of settings, and in fact, instructional designers don't follow one specific career path. Some may think about a career in education as only happening in schools, but there are many professional opportunities for instructional designers in educational settings outside of school settings. You can find these opportunities in any setting where the focus is on education, teaching, or learning!

Table 1-1 provides a summary of different settings where you may find instructional designers at work, along with a description of the type of work they do. Because the field of instructional design is very broad, the roles of an instructional designer also vary by career setting. (See Chapter 14 for more information.) The description in the table provides a few insights into some typical tasks undertaken by instructional designers in those settings.

TABLE 1-1 **Types of Settings Where Instructional Designers Work**

Setting	Description
Business and Industry	The private sector is one of the largest employers of instructional designers. Industries that hire instructional designers include banking, insurance, hospital-ity, automobile manufacturing, among many others. Instructional designers often work on teams with subject-matter experts, technology specialists, or project managers to design instruction for employees of the company. Examples include onboarding instruction, on-the-job training programs, or compliance training.
Private Consulting	You find instructional designers in private consulting companies or within a firm of other consultants. Unlike instructional designers employed by a specific business to design instruction for the company in-house, consultants are hired externally by a company to design instruction for them. The work instructional design consultants perform is similar to those who work in business and industry. (See the previous description.)
Higher Education	A growing sector for instructional design careers is higher education, specifically colleges and universities. With the growth in online distance learning, universities are offering degree programs and courses that are fully online to students who do not attend the university campus. Instructional designers often work with faculty to translate their classroom instruction into an online class. Typical tasks include creating online content, activities, and media for delivery via a learning management system (LMS). Instructional designers in higher education also work with units and faculty to design innovative classroom-based instruction for students on campus, including educational technologies, simulations, or games. They also work to support the training and professional development needs of all employees across the broader university system.
Informal Education or Non-profits	You find instructional designers in organizations that provide public educational programming. Examples include museums, libraries, historical sites, or nature centers. Instructional design in these settings includes exhibit design, self-guided tours (audio or text), or workshops.
Military	Instructional designers have careers in government and military organizations to design training for military personnel. Training in the military often uses advanced and emerging technologies such as virtual reality and simulations.
Medical and Health	Instructional designers work in the medical and health care sector to design medical education for health care workers, medical students, and/or patients. This work also includes related health care organizations such as pharmaceutical companies or nonprofit organizations focused on public health education.

The job of an instructional designer

As shown in the previous section, the job of an instructional designer varies somewhat based on career setting (business versus higher education, for example) and size of an organization. However, most instructional designers share a common skillset of design practices — practices I describe in more detail over the course of this book. Table 1-2 provides an overview of common skills and tasks that are conducted by instructional designers.

TABLE 1-2 **Job Skills of an Instructional Designer**

Category	Description
Communication and Collaboration	Instructional designers must be good communicators and collaborators. The job of an instructional designer often involves working collaboratively on a design team with others to create the instruction. Designers use written and oral communication skills to convey the need for instruction as well as to document the knowledge, skills, and content that need to be learned. Instructional designers communicate with subject-matter experts (SMEs) around complex material that is often outside of their own area of expertise. Designers work with SMEs to identify key aspects of learners' performance that may be lacking as well as content and skills that need to be learned. In some settings, instructional designers may need to collaborate with technical experts or creative artists such as programmers, multimedia specialists, or graphic artists. Together, they develop the technical assets for the instruction such as websites, videos, graphical images, games, simulations, and so on.
Analysis and Design	An instructional designer has strong analytical and design skills. They analyze a performance problem to determine root causes and identify possible instructional solutions. They work with SMEs to analyze the tasks needed for successful performance, and to translate those into goals and objectives. Instructional designers use their design skills to create effective and appealing instructional activities and assessments based on the objectives. They also use analysis and design skills to select an appropriate technology to deliver the instruction or use their design skills to convert classroom-based instruction into online instruction.
Technology Production Skills	Do instructional designers need to have strong technology skills? The answer may depend on the work setting and if you have a team that includes technology specialists. However, many instructional designers have at least some experience in technology production such as: • Designing online courses for delivery through a Learning Management System (LMS) such as Blackboard, Moodle, or Canvas. • Using authoring tools such as Adobe Captivate or Articulate 360 (Rise and Storyline) to develop instruction that is delivered online or via a mobile device. • Graphics and audio/video production and editing skills.

Category	Description
Project Management	Instructional designers typically manage multiple instructional design projects at different phases. This requires strong project management skills, especially when multiple design teams are involved. Sometimes a designer is starting a new design project at the analysis stage and at the same time working on revisions to another course. Designers need to effectively manage the demands of different instructional projects at different phases of design.

Considering a career as an instructional designer

At the time of this book's publication, the employment website *Indeed* (www.indeed.com) listed over 9,000 jobs after entering "Instructional Design" as a keyword. This search suggests that instructional design is an active and growing profession. In fact, according to the Bureau of Labor Statistics, jobs in Instructional Design are expected to increase 11 percent during the 10-year period between 2016 and 2026. Data from 2017 shows that the median salary of instructional designers was \$63,750.



TIP

Here are a few tips to get started in the instructional design field. One path is to opt for an education program offered by a college or university. Several universities offer bachelor's degrees, master's degrees, certificates, or minors in instructional design. In fact, many graduate programs focusing on instructional design are offered online from some of the top accredited universities. Following a formal educational path, you can pursue a degree in instructional design and receive training and experience (possibly an internship) while you pursue the degree. Sometimes the name of the degree may be called "instructional technology" or "learning, design, and technology" or "learning sciences and technology." The advantage of taking this path to a career in instructional design is that you get to take advantage of the networking, alumni, and partnerships set up through the academic program.

Another path to a career in instructional design is more indirect but is quite common. A lot of instructional designers enter the field through a career change. Although they may have started out as a professional in one field outside of education, they eventually pursue an opportunity to teach or train others, often within their existing company. Others may stumble into the job without any formal educational training in instructional design but a passion for the field or for teaching. Regardless of the specific pathway, instructional designers following a more indirect path are often responsible for their own professional development in the instructional design field.

I teach many graduate students in my faculty job at Penn State who fall into this category — that is, they have been doing instructional design work in their jobs but were not trained as instructional designers. They have a lot of instructional design experience and enthusiasm, and they come to our program to learn more about learning design and technology skills. I find they quickly grasp new ideas to apply to their work.



TIP

Being an instructional designer requires continual development and refinement of skills as the field advances. Fortunately, there are well-designed short-courses available online or through universities to update your skillset. Also, you can find professional associations and online networks of instructional designers who can help connect you with professional development opportunities. A few organizations and their websites are listed below:

- » Association for Educational Communications and Technology (AECT): <https://aect.org>
- » Association for Talent Development (ATD): <https://www.td.org>

Overview of the Instructional Design Process: The ADDIE Model

The first step to understanding instructional design is to become familiar with some of the basics. In the planning stages for this book, I decided that the best way to help you get familiar with the basics is to structure the major parts of this book around one well-known, 5-phase design process known as the ADDIE model. Using the first letter of each phase, ADDIE is an acronym that stands for Analyze, Design, Develop, Implement, and Evaluate.



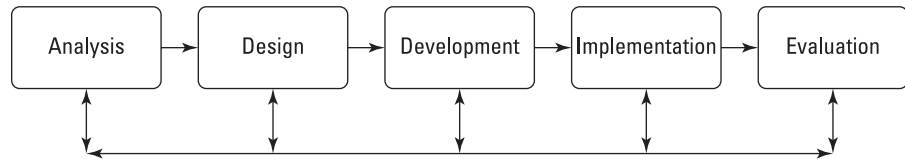
REMEMBER

ADDIE is an overarching design framework that provides a common process for designing instruction for any instructional design goal. Although the parts of this book proceed sequentially, starting with “Analysis” and ending with “Evaluation,” the five phases in practice are highly interconnected, flexible, and iterative.

As shown in Figure 1-1, design activities and decisions from one phase of the design process influence the activities and decisions at the other phases. The five phases follow a general sequence that starts with analysis, then design, development, implementation, and evaluation. But, during the analysis phase, for

instance, a designer also begins to think about considerations for the development, implementation, and evaluation of the instruction. Likewise, during the implementation phase, designers revisit the assumptions and constraints identified during the analysis phase. All phases of ADDIE work together to achieve the instructional objectives. By continually going back and forth between the different phases of the model at different points in the design process, your instruction continually improves as it becomes more informed by the other phases of ADDIE.

FIGURE 1-1:
The ADDIE
Instructional
Design Process.



REMEMBER

What's most important to remember about the ADDIE model is that it is iterative and that you make design decisions that are in *alignment* across each of the five phases of the process.

In the following sections, I provide an overview of activities that are performed at each phase of the ADDIE model. Each of these phases is broken out in more detail in the other chapters of this book.

The Analysis phase: Deciding what the needs are for instruction

In the first phase of the ADDIE process (Analysis), you analyze the setting, learners, and need for the instruction. When analyzing your context for the instruction, you typically work with subject-matter experts (SMEs) and other stakeholders to clarify the problem that is creating the need for the instruction and outline possible solutions. Designing instruction is a good solution if your learners need to learn new knowledge, skills, or attitudes.

This type of analysis is often called a “needs analysis” or “gap analysis,” where you clarify the problem and potential solutions. After you have identified that instruction is a viable solution to the problem, your next step is to examine the tasks, knowledge, and skills that are to be learned during the instruction, also referred to as a “task analysis.” Typically a subject-matter expert (SME) breaks down the tasks, knowledge, and skills needed for effective performance, but the process is facilitated by an instructional designer.

All phases of ADDIE build upon the work of the Analysis phase. During the Analysis phase, you may be conducting the following types of activities:

- » Identifying organizational needs and values (sales targets, strategic plans, quarterly reports, number of patrons) that inform the need for the instruction.
- » Learning about the context where the instruction is to be implemented, such as resources, infrastructures, policies, support systems, or logistics.
- » Conducting a needs analysis by identifying optimal performance, actual performance, possible causes, and initial solutions.
- » Conducting a learner analysis to understand their characteristics, motivations, accessibility needs, or barriers to access.
- » Collecting data to inform your analyses by using interviews, focus groups, or surveys.
- » Classifying the type of learning goals that the instruction entails by using a framework such as Bloom's Taxonomy. (For more on Bloom's Taxonomy, see Chapter 4.)
- » Performing a task analysis to break down the overall goal into the major tasks that need to be learned as well as any subtasks, knowledge, or skills needed to perform the major tasks.



TIP

The output of the Analysis phase are reports that document the most essential information related to the learner analysis, needs analysis, context analysis, and task analyses. You then share these with the stakeholders involved in the project to make sure everyone is on the same page before moving to the design phase.

The Design phase: Figuring out what the learners need to know and how to learn it

The Analysis phase of the ADDIE model is followed by the Design phase. This part of the instructional-design process is where you use the results of your analyses to begin outlining the content, activities, and any assessments that are to be included in the instruction.

Here are a few key tasks that take place during the Design phase:

- » Based on your task analyses, write clear statements of learning objectives for each task and subtask. Use action verbs from Bloom's Taxonomy for each objective that aligns with the level of learning that you need to support (remembering versus evaluating, for example). Objectives guide the design of

your instructional content and activities as well as the criteria for evaluating if it was successful.

- » Create assessment items that match your instructional objectives. In practice, you develop your objectives and assessments at the same time to make sure they are aligned.
- » Choose what type of instructional design model or methods you want to use to create the activities for your instruction. Design models guide us to determine how the objectives are learned. Some design models focus on how to effectively present information and practice on specific skills to be learned. Other types of models are more open-ended.



Be sure to share your objectives, assessments, and plans for instructional activities with all stakeholders. These documents are useful for all members of the design team as well as anyone who is helping with the technical production or development of the instruction (programmers, graphic artists, and so on). This time is good to get more feedback before investing in development.

The Development phase: Hammering out the details

The third phase of the ADDIE model is the Development phase. This phase is a very exciting part of the instructional-design process because your instruction soon comes to life! The Development phase uses the information from Analysis and Design phases to make decisions about the actual creation of the instructional materials. You may be the person who is both designing and developing the instruction, or you may be part of a development team of programmers, graphic artists, or video production specialists. The result of the development phase is an instructional product (an instructional website, a video, a print manual, or presentation slides, for example) that is ready to be delivered by an instructor or on its own to learners.

Here are some common tasks that you may need to do during the development phase:

- » Analyze different options and formats for delivering the instruction to learners. Should the instruction take place synchronously (at the same time) or asynchronously (at the learners' own time and pace) or as a hybrid? Will it take place in a classroom or virtually (online)? These decisions impact the technologies you select for the instruction.
- » Examine different types of technologies (print, video, audio, website, video conferencing, and so on) and their characteristics to determine how they may

enhance the learning of your instructional objectives. Some technologies, for instance, support collaboration better than others. If collaboration is important to your design goals, then you want to narrow down the focus on technologies that promote collaboration.

- » Create instructor manuals, learner guides, media, or other digital materials (presentation slides, for example).
- » Ensure that multimedia instructional materials are accessible for diverse learners and reflect effective multimedia design principles.
- » Develop scripts, storyboards, or flowcharts to communicate the flow of the instruction for programmers or other development team members.



EXAMPLE

This section finishes with some examples of a few instructional development activities:

- » Creating a lesson plan for a corporate training session, including handouts, printed case studies, and presentation slides.
- » Creating a hybrid or flipped classroom, where some instructional activities take place in a classroom at the same time and some parts asynchronously online. For the online instructional elements, you create video lectures, content pages, or discussion boards with a Learning Management System (LMS).
- » Developing a printed manual for learners with step-by-step instructions for them to follow on the job.
- » Recording an audio tour for visitors to a museum.

The Implementation phase: Rolling out the instruction

After the Development phase, it is time to try out the instruction with your learners. Because the ADDIE model is iterative and flexible, we usually begin thinking about implementation during the analysis phase. Early in the instructional design process, it is important to consider the factors that can lead to successful implementation, such as having an accurate assessment of your financial resources, support, policies, facilities, and logistical constraints. Planning for implementation of your instruction looks different for different types of instruction.



EXAMPLE

Examples of implementation activities that you may do as an instructional designer include:

- » Try out the materials with some learners in advance of the full rollout of the instruction and make revisions.
- » Train instructors how to teach by using the instructional materials and any technologies that they need to use.
- » Communicate to learners and instructors in advance about all hardware and software requirements for the instruction.
- » Create introductory lessons for learners on how to use the technology that is used for the instruction (video conferencing software or LMS, for example).

The Evaluation phase: Did the instruction work?

Although positioned at the end of the ADDIE process, evaluation doesn't just occur at the end of the instruction! Evaluation is important at every phase, and an instructional designer continually seeks feedback during each phase of the process so they can adjust the instruction while it is being designed and developed.

At the end of the instruction, however, an instructional designer evaluates if the instruction is successful. Based on the evaluation, you and other decision makers can determine if the instruction needs further revision and whether it met the objectives it was designed to achieve.

There are many ways to evaluate whether the instruction was successful. Kirkpatrick's model of four levels of evaluation (developed by University of Wisconsin-Madison Professor Donald K. Kirkpatrick in the late 1950s) is one of the best ways to analyze different dimensions of effectiveness. The four levels of evaluation are:

- » **Level 1: Reaction.** Level 1 evaluates learners' satisfaction with the instruction. Did they like it and find it useful? Level 1 is commonly evaluated using surveys given to learners at the end of the instruction.
- » **Level 2: Learning.** Level 2 evaluates if learning occurred. It most readily assesses if the learning objectives were achieved. You can use quizzes to assess learning or compare what learners knew about the topic both before and after the instruction.

- » **Level 3: Behavior.** Level 3 asks if learners are applying what they learned on the job or in their everyday lives. You can observe on-the-job performance or ask learners after the instruction ends if they are using what they learned.
- » **Level 4: Results.** The fourth level of evaluation determines if the learning that resulted from the instruction had an impact on organizational results such as costs, goals, job satisfaction, customer satisfaction, employee retention, and so on.



REMEMBER

Not every instructional project requires evaluation at all four levels. Generally, the higher the level of evaluation, the more costly and complicated it is to evaluate.

Understanding Different Methods and Design Models

The ADDIE model is one of the most well-known models in the instructional design field. ADDIE describes the various processes and activities conducted by an instructional designer that are applicable to almost any instructional situation. ADDIE illustrates the essential, interacting elements of the instructional design process, highlighting the systematic nature of instructional design.

However, the ADDIE model does not prescribe specific guidelines on how to design activities, strategies, and methods to achieve your learning goals. Instructional designers use other types of instructional models to help guide them in the development of activities, strategies, and sequences of the instruction. This section briefly describes a few different methods and models to illustrate a range of approaches.

Looking at rapid design approaches

One criticism of the ADDIE approach is that it is time consuming and requires an extremely detailed approach that does not always align with the needs for some designers to design and develop their instruction rapidly and efficiently.

In response to these limitations, some instructional designers advocate for rapid design approaches such as the Successive Approximation Model (SAM). The SAM model is referred to as an “agile” model that allows for more flexibility by developing prototype experiences early in the process and then progressively iterating

them through feedback. In this way, it is a less daunting design process that works in those settings where detailed instructional analyses and design practices are not practical.

The SAM process in a nutshell works in two main phases. First is the preparation phase, which reviews background information, assumptions, and needs for the instruction. It then moves quickly into the iterative design and development phase which entails creating design ideas and prototypes of small chunks of the instruction that show what the instruction and interactions will look like. The prototype is then shared across stakeholders, reviewed, and revised in a successive and iterative feedback loop.

Working with direct-instructional designs

I'd be the first to admit that there are far too many different types of instructional design models to cover in one book. Nevertheless, there are common approaches to teaching and instruction that can be categorized into broad approaches. Here I give an overview of one type of instructional design method I refer to as direct instruction.

Direct instruction is instruction that is focused on learning specific knowledge or skills that are well defined. For well-defined instructional goals, such as performing a sequence of steps or learning specific information to apply to well-known problems or situations, the best choice for your instruction is to use a direct instructional-design model such as Gagne's Nine Events of Instruction (a concept I discuss in much greater detail in Chapter 6).



REMEMBER

Direct instructional models share several common patterns for organizing your instruction, based on how people learn and remember information. Chapter 6 presents three different models in detail along with tips for design.

A summary of instructional tactics commonly used in direct instructional design models include:



TIP

- » Gain learners' attention, show why the instruction is relevant, and establish what learners should expect.
- » Present content information broken down into smaller chunks of information that do not overwhelm learners' memory.
- » Guide learners to process and learn the content with strategies such as examples, non-examples, demonstrations, questions, or summaries.
- » Design practice opportunities as well as feedback on performance.

Opting for open-ended designs

Some instructional design models focus on how to support less defined learning goals such as problem solving. (For an overview of two different models for designing open-ended instruction, see Chapter 7.)

Here, I provide a summary of instructional methods commonly used in open-ended design models:



TIP

- » Start the instruction with an open-ended problem, case, or question. The problem should be complex and have more than one answer. Open-ended instruction is often collaborative.
- » Ask learners for preliminary ideas and solutions to the problem. It is expected that they will not yet have very refined solutions, but the goal is for them to start with what they already think or know.
- » Present content, resources, collaborations, or technologies to help learners solve the problem and progressively build on their initial ideas.
- » Provide guiding questions and ongoing checks of understanding.
- » Ask learners to share what they have learned with others.

In practice, instructional designers often draw upon different strategies and activities to create engaging instruction. You discover more about how to choose different strategies and activities based on your goals in the chapters ahead!