

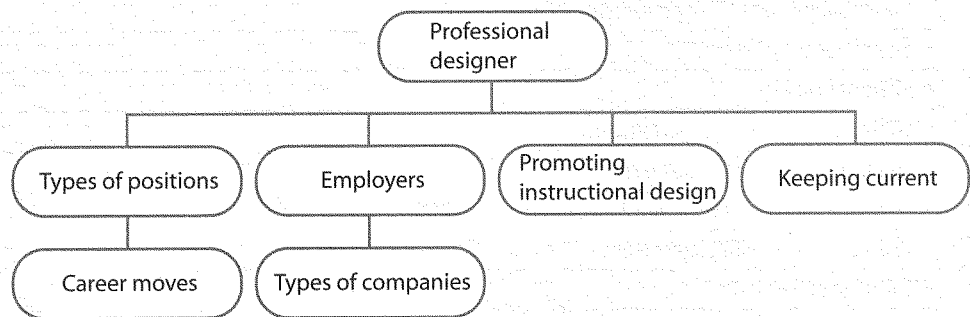
Chapter 12

The Professional Designer

Learning Outcomes

- Identify common employment opportunities for instructional designers.
- Promote instructional design in a manner consistent with the values of the organization.
- List sources for continued professional development.

Chapter Overview



Orientation within the Design Process

Now that you've worked through the five elements and the five phases of instructional design, it's time to examine the instructional designer's role in a variety of institutions and settings. In this

chapter, we look at the range of institutions and types of positions that designers hold, and the techniques to use to promote instructional design within an organization.

The Professional Instructional Designer

Fortunately for those of us in the field, instructional design is growing and maturing, and there is increasing demand for well-trained instructional designers (see also Chapter 1). This demand has been fueled by the growth of technology, a dramatic increase in distance learning, reliance on the Internet, and the prevalence of computers in general. All these factors have increased the need for people who have systematic skills and tools to understand learners, develop effective stand-alone instructional materials, and conduct evaluations—in other words, instructional designers. In fact, many Web development teams have come to value having an instructional designer on staff even if they aren't designing an instructional product; instructional designers bring skills that help ensure that a Web site is useful to and usable by its target audience.

Some people specialize in one of the elements or phases of instructional design; others are generalists and can do all of these things. For example, there are specialists who only conduct formative evaluations or write assessments. There are specialists in certain subject areas, such as mathematics or languages. And there are specialists who focus on a particular population, such as K-3, or college students, or corporate personnel. In your career, you may handle all the phases and elements of design, and you may have some jobs that focus on just one task or skill. You may be employed in a variety of positions, for various employers, both large and small, or you may move up the career ladder within a single company. A good instructional design education can prepare you for many different positions in the industry.

Types of Positions

Instructional designers come from many backgrounds and bring many interests to the field. That diversity continues to manifest itself as they move into the profession. Some common kinds of positions filled by instructional designers follow.

Staff Instructional Designer This is the “classic” instructional designer: the person who performs the work of the five elements and five phases of design. A designer might work with other team members, especially to produce technology-based products, or might work independently, such as to produce classroom-based instructional materials.

Project Coordinator At many companies, instructional design tasks are contracted out to freelance designers, but the person hiring and managing these freelancers is an internal employee, usually an instructional designer. This individual must be able to evaluate and guide the work of other designers.

Designer/Developer/Artist Designers who have a background in programming or other technical skills may be able to handle the technical aspects of a multimedia or e-learning project. Some designers perform all of the tasks associated with developing an e-learning product including graphics, media production, and programming. By using relatively easy-to-learn yet powerful tools such as Macromedia's Dreamweaver, a designer can serve as a “one person shop” and provide employers with a cost-effective, turnkey operation.

Increasingly, employers are expecting instructional designers to handle most of the tasks associated with developing e-learning programs. This works best in settings in which the work needs to be produced quickly, costs need to be controlled tightly, and the additional resources of specialized team members aren't necessary.

Career Moves

The instructional design team on a large project or in a corporate department often consists of a group of designers with varying levels of experience and education, and a manager who supervises the employees and the work. A typical career path for an instructional designer who moves up to the next level is to begin managing either the project or other instructional designers. Designers who successfully make this transition have good people skills,

are organized, can manage time and money, and understand both the “big picture” and critical details. Because these management skills are also important instructional design skills, it’s often a good fit.

Project Manager The person charged with delivering the right product on time and on budget is the project manager (PM), sometimes called the producer. An instructional designer often serves as the producer or project manager, especially if the designer has a background in media production or multimedia design work. The PM keeps the production team focused on the big picture by making it possible for them to attend to all the details in their respective jobs. The best PMs understand that they move projects along by supporting the team, not by barking orders. The PM is also responsible for making the client happy while staying within the scope of the project. The job requires the ability to impose structure and discipline but remain flexible and responsive; adhere to quality standards while meeting deadlines and staying within budget; keep everyone informed but not overwhelmed; and keep things moving. Recognize, however, that the decisions PMs make aren’t always the same decisions instructional designers might make. It’s important to realize there’s a difference between the two roles, and sometimes a conflict.

The most effective PMs are personable, organized, energetic multitaskers who follow up on details and enjoy solving problems. Because it can be difficult to find people with all of these skills, some teams divide the role, with one person serving as the production manager who supervises the internal team and the other person serving as the liaison to the client. This strategy often is used on big projects that may take more than a year and involve dozens or even hundreds of staff positions. However, for this dual-manager system to function effectively, one of the individuals has to have final authority on all aspects of the project.

Instructional Design Manager On a large project, or in a company with several instructional designers, the manager is often an instructional designer. Managers can be involved in hiring and firing personnel, coaching designers, scheduling and budgeting projects, and reviewing work. Managers also establish standards for instructional design and train everyone on the design team to recognize and adhere to those standards. Good managers foster camaraderie among their instructional designers while recognizing that different designers have different working styles. New hires are likely to need a great deal of supervision and coaching, but as designers become more experienced, the manager’s role diminishes. Helping to develop the skills of less experienced designers can be a satisfying learning experience for the manager—you learn a lot when you have to teach someone else!

Managers also must solve problems and deal with crises. The problems could involve other production staff

or the client and SMEs. Regardless of who is involved, managers must take action as soon as they become aware of the problem. They need to research the problem and collect data from all appropriate sources before making any decisions. Sometimes, managers have to deliver bad news to a client or colleague. The individual might become angry about the news, but it’s the manager’s responsibility to address problems as soon as possible. One of a manager’s hardest tasks is to stay calm and objective when emotions start to run high.

When an instructional designer just isn’t a good fit for the company or the kinds of assignments available, the manager must make the difficult decision to let that person go in the most humane manner possible. Because of the nature of project-based work, many instructional designers will be laid off when projects conclude. This can happen many times over a career and in no way reflects the designer’s skills and value to the projects. If you are a manager, you may have to make difficult decisions about whom to retain and whom to lay off. Work with your supervisors and personnel staff to follow the procedures your company has adopted.

Sales and Marketing Instructional design work is similar to the work marketers do in analyzing audiences and creating demand for products. This makes marketing a potential career move for instructional designers, especially if the market is instructional products. Although there are important differences between the two fields, instructional designers will find many similarities as well.

Sales is another area in which designers may find new career challenges. The earnings potential in a sales position may be significantly higher than in traditional instructional design positions. Opportunities exist for designers to sell instructional design services or educational products. As we’ve stressed in this book, good instructional designers need strong communication skills, which are also critical in sales and marketing.

Employers

Who hires instructional designers? Many companies and organizations produce materials and provide services that need the direction of an instructional designer. Here are some of the environments in which instructional designers work.

Corporate Professional Development Training departments typically are responsible for evaluating training needs in the organization, developing and delivering training, ensuring that training sequences support each career ladder, and managing any other training functions such as supporting employees in earning advanced degrees. In a training or staff development department, the instructional designer may develop curriculum for e-learning or for other trainers to deliver. Training is

often part of the personnel or human resources (HR) department of the company, so the main career path for instructional designers is through the HR hierarchy.

Training departments often divide the training development and delivery functions into specific divisions within the organization. For example, manufacturers may employ trainers (and instructional designers) who specialize in developing training for particular manufacturing tasks or product lines. Some might specialize in training employees at partner companies such as suppliers or distributors. In many companies, separate training units support information technology, management, and sales. The instruction they develop can include orientation and basic skills for new employees, equipment and procedure-specific training, software applications, quality control, budgeting and financial concerns, and HR issues such as sexual harassment and hiring and firing, as well as other employment matters.

In his influential 1994 book *The Fifth Discipline: The Art and Practice of the Learning Organization*, Peter Senge argued that successful companies stay flexible and adapt to the rapid changes of the marketplace. They accomplish this by creating an environment in which employees learn at all times and at all levels. In other words, learning is integrated into the daily fabric of the organization—it isn't a special, occasional activity—and it's valued. He calls these companies "learning organizations." Even as business consultants like Senge have advocated that companies embrace a culture that adapts and grows, the need for ongoing training has grown, too. Companies are experimenting with how they develop and deliver this mission-critical training. Some have sought to promote the importance of training and increase its visibility within the company by elevating the training manager to a vice president level or changing the title to director of learning or chief learning officer. It might seem like mere semantics, but these efforts represent genuine attempts to send the message that learning is as important to the company's success as is finance and mar-

keting. In this context, "learning" connotes a more proactive, flexible, and learner-centered approach to employee development than does "training."

Corporate Customer Support Companies also offer a variety of courses to support their products. Particularly at technology companies, instructional designers may be involved in developing training for customers. This product training might be part of the company's marketing efforts, designed to help make the sale, or part of customer service after the sale. Programs can range from "how to" courses designed for novices to advanced courses leading to certification on a software product. Some courses provide customers with opportunities to enhance their skills in order to make better use of the company's products. For example, a manufacturer of color printers might offer courses on how to create effective newsletters or how to take better digital photos. Although these courses don't directly support the company's product, they do foster customer loyalty. Customer education courses may even be a profit center for the company, and the department might be fully funded by revenues from these sales.

Corporate Information Support In many corporate training arenas, the line is blurring between purposeful instruction and information support. Corporate instructional designers traditionally have been a part of the training and staff development department to support employee training, or the marketing and customer service department to support customer training. Again, especially for technology companies, markets and products change so frequently that there isn't time to generate formal training. These companies adopted other strategies for meeting the information needs of employees and customers, such as online help, users' guides, specification sheets, job aids, and other resources.

Some companies call this "stealth" training or a variation on just-in-time training. John Coné, past president

Customer Education as Profit Center

A software company has three levels of customer education offerings, all designed to provide a return on investment so that the department is self-sufficient. The customer's lowest-cost option is a series of online course modules. The cost of individual modules is relatively low, but purchasing all of the modules would be pricey. This option works well for customers who use only a portion of the total software product or who need to stretch the costs of training out over time. The next level up is also

a computer-delivered version, but it includes Flash animations and voice-over narration to guide learners through the software's functionality. The most expensive option is a one-week classroom-based training program. Although these courses are conducted at locations throughout the world, the costs of the class, of travel, and time away from work can be significant. This tiered approach has been popular with customers and generates revenue for the company.

of the American Society for Training and Development (ASTD) was formerly vice president for learning at Dell Computer, where he promoted “on-demand learning.” He explained: “The ideal ‘learning event’ at Dell has a class size of one, lasts 5 to 10 minutes, and takes place within 10 minutes of when someone recognizes that he or she needs to know something. Our challenge is to reduce learning to its smallest, most-useful increments and to put the learner in charge of the entire process” (Dahle, 1998, p. 178).

Publishers Educational publishers offer resources to supplement or replace textbook offerings. Some online products replace the workbooks that once accompanied textbooks. There are supplemental products that serve niche markets such as ESL, literacy, developmental math, and enrichment programs. Some publishers specialize in training programs for corporate functions—for example, sales training, management training, or communication skills. A growing market is the homeschool sector, which includes parents who choose to provide their children with home-based instruction. All of these programs require instructional design and production, just as with any online or multimedia product.

Health Care Industries Like other industries with rapidly changing technology, the health care sector has many training requirements. Physicians, nurses, and other practitioners have to maintain their licensing by completing continuing education programs each year. Pharmaceutical companies need to develop training for their sales staff, providers, and customers. Hospitals and other institutions must provide training to their staffs and education for their patients. Educational materials for patients and their families include information on preparing for a surgical procedure, taking care of ill or disabled family members, and maintaining good health. Some hospitals provide ongoing patient education via internal cable channels available to patients in their hospital rooms. All of these health care instructional programs can be delivered in classroom settings, online in an e-learning environment, through videotapes or DVDs, or via blended learning.

K-12 Education Some schools and many school districts have curriculum specialists who are responsible for developing instructional materials, devising and implementing scope and sequence programs at each grade level and across grade levels, and ensuring that schools implement state standards appropriately. As schools bring more technology into the classroom, there’s a growing need for school-based specialists who understand both learning and technology. This specialist might be responsible for helping teachers develop and deliver lessons using technology or for devising technology-based projects for students. She or he is also likely to be involved in

planning and budgeting for instructional technology at the institution.

Another path for instructional designers is in developing and delivering professional training to teachers and other staff. For example, most school districts provide opportunities for professional development to teachers during the school year, and most states require teachers to attend a certain number of continuing education programs each year. Instructional designers may find themselves in demand to deliver workshops on topics such as curriculum development, educational technology, and project management. State agencies have many of these same needs, as do their local administrative units. This can be a rewarding and challenging job, especially for the instructional designer with prior classroom teaching experience. In fact, classroom experience is often a criterion for employment in these positions. Even when not required, experience in the classroom greatly enhances designers’ credibility when working with this group of clients.

Many countries understand that education represents a critical investment in their competitiveness in the global economy. They are investing heavily in instructional development and technology to boost their students’ knowledge and skills. Even countries that have lagged in educational investment in the past are looking to standards-based and technology-based delivery to achieve rapid gains. With centralized planning and development, they can deploy these programs nationally. And they rely on instructional designers to develop and implement these programs.

Higher Education In recent decades, institutions of higher learning have gone from having mainframe computers with “dumb terminals” available only to computer science students to being among the most wired institutions anywhere. Higher education settings include community colleges, small colleges, state universities, major research institutions, and online degree providers. A new type of institution of higher education has emerged in recent years, catering to busy adults seeking undergraduate and graduate degrees. These colleges do not have physical plants but instead have invested in the electronic resources necessary to provide a full, online instructional experience.

Online degree programs are offered by “brick and mortar” colleges and universities, as well as through new institutions founded specifically to serve distance learners. Some are linking students at different campuses, and even in different countries, through Web-based initiatives designed to foster the kinds of collaborative skills needed in the global economy. Many professors also use the Internet in traditional classes, posting assignments and readings online, and using tools such as chat software and discussion boards.

With this remarkable transformation of higher education has come increasing demand for specialists to

produce effective computer-delivered instructional materials. Each of these institutions hires specialists to design and develop materials to support or supplant classroom teaching. An instructional designer might develop materials to support lectures, produce ancillary materials, maintain Web sites, and teach faculty to use technology effectively. At the largest institutions, groups of instructional designers might support individual schools or departments.

Extension Services Universities have offered extension services for many years. Originally seeking to reach rural learners, many now offer online courses and even complete degree programs. The extension courses are not always the same as those offered by the primary institution. For example, the primary institution may require that students be admitted to the university whereas extension courses typically are available to anyone who enrolls. Extension offerings can include courses for college credit, noncredit courses for professional or personal enhancement, and high school courses.

Virtual Schools Another development in online learning involves virtual schools, usually high schools that serve students who are homeschooled or have special requirements. These students may include rural students, elite athletes, students with medical problems that prevent attendance at a regular school, and young people who are confined to juvenile detention centers. These virtual schools offer diplomas and have academic requirements similar to those at a regular school. They are administered by both established educational institutions and organizations founded specifically to provide online instruction.

Nonprofit Associations To meet the needs of members who must satisfy annual continuing education requirements, some nonprofit associations have found that they can offer these courses and bring in needed revenue at the same time. These offerings are tailored to the specific needs of the association's members. Members who complete the training programs earn credits, which may be required for continuing certification or licensing. One popular online option is for a for-profit company to develop and deliver the courses to association members at no cost to the association. The company then uses a revenue sharing formula to provide the association with a percentage of the receipts. Many associations offer Continuing Education Unit (CEU) workshops through videoconferencing sessions featuring one-way video and two-way audio hookups.

Museums and Parks Public institutions such as art museums, historical sites, special collections, zoos, aquariums, botanical gardens, science centers, parks, and nature preserves typically have an educational

purpose as part of the institution's mission. However, many also have other goals such as entertaining visitors, collecting artwork, or preserving natural environments. Because public institutions compete with myriad other leisure activities, they may have a market-driven orientation to developing the educational aspects of their presentations and user activities (Savenye, 2003).

E-Learning Developer Whether delivered over the Web, or from a CD-ROM, hard drive, or a network, computer-based training, or e-learning, is capturing a rapidly growing share of corporate higher education and workforce development education. Companies that specialize in producing these courses are e-learning developers. They might develop and sell proprietary training products or provide customized development services to other companies. Some developers specialize in serving niche markets while others are generalists. An e-learning developer might only serve the educational publishing industry or only produce management training. Some companies develop training only for certain platforms while others support all major systems.

Other Settings Instruction is a significant component of the work of many other organizations such as religious institutions, the military, and government agencies. The success of these institutions depends on designing and deploying effective instructional materials to target audiences. There are instructional design opportunities in all of these environments.

Types of Companies

Regardless of where you start your career, you are likely to work at several different jobs along the way, perhaps even as an independent contractor. Instructional designers are employed by a variety of companies, both large and small. Although each employment option has its advantages and limitations, an awareness of them can help you select the option that is right for your skills and interests.

Large Companies Some companies employ entire departments of instructional designers; others might have one person who does instructional design among other tasks. At large, established companies, this work can be very steady and predictable. But this doesn't necessarily mean the work is repetitive. On the contrary, when you work for an established company with a strong hierarchy, finely tuned procedures, and ample tools and resources, you are free to concentrate on the job of instructional design. You aren't scrambling to obtain materials or spending time establishing how things get done. Instead, you are getting training on new software, receiving your

A Personal Journey

by Debby Kalk

In this chapter, we describe the great range of employment directions in which your instructional design career can take you. You might find just the right place early on and stay there for your entire career, or you may work in a variety of environments. My career is an example of the latter. I don't remember what I expected when I decided to become an instructional designer, but I'm certain that my experiences have exceeded my expectations. I like to say that I have the perfect career for someone with an attention span that lasts six months, which is about how long I'm typically engaged in a project. So, a couple times each year, I learn about a new industry and new content; meet new clients, SMEs, and learners; and grapple with new technology and new delivery requirements. I don't think I've ever been bored.

I have worked in companies of all sizes and types: in a training department for a large corporation with 16,000 employees, for a small multimedia developer with a few dozen employees, and in a media support position at a college. I've owned a company with as many as 70 employees, and I've been a freelancer. I've worked on teams with a hundred people, and I've been the entire team, serving as instructional designer, SME, and producer.

My clients have included Fortune 500 companies, educational publishers, universities, nonprofits, and individuals.

They've hired me to write instructor's manuals for classroom delivery, produce educational videos, and create online courseware. I've produced training programs on mission-critical software for engineers and developed a program that aimed to change middle school students' attitudes about drug use. There have been stints immersed in learning about the electric utility industry, the oil business, airlines, banking, health care, technology, social work, business development, the space program, and teacher training. For educational applications, I've developed programs on world languages, math study skills, economics, English grammar, history, film appreciation, and criminal justice, for secondary and higher education. I've worked with tremendously talented artists, programmers, and producers; trained novice instructional designers; and learned much from colleagues, clients, SMEs, and learners.

As you will discover, it's deeply satisfying when the feedback from evaluations indicates that your learners have really learned something. It's exciting when a project you've designed wins an award. And when clients return for repeat business, you know you are doing something right. In this field, you meet many interesting people, some of whom become close personal friends. There just aren't many occupations that can deliver so much variety, so many challenges, and so many rewards.

paycheck on time, attending conferences, and participating in professional organizations. There are also likely to be mentors in the organization who can help you with your career. One disadvantage of working in a big company is that you might not get noticed and might not attain a decision-making position for several years or more.

Another issue is that your skill set—instructional design—might not reflect the company's core product. For example, if you work for a company that manages health care billing services, your instructional design skills may be important to the company but not critical. If you were an accountant or a registered nurse, your skills might be useful in moving into leadership positions. As a specialist who doesn't contribute to a company's mission, you may need to change jobs to move up the career ladder. By moving to a larger company, you may be able to fill a series of positions with increasing levels of responsibility. Of course, if you work for a company that produces instructional products, there probably will be strong career opportunities within that company.

Small Companies Sometimes, small companies can provide instructional designers with more opportunities than can larger companies. Designers may participate in a wide variety of projects, take on more and more responsibility, and become increasingly important to the company. These companies usually are flexible and, in turn, allow you to be flexible in designing and delivering training. There are fewer procedures but more opportunities to try new strategies and set policies for the training function. A disadvantage of working for small companies is that they might not be as financially solid as bigger companies. You may not enjoy perks such as paid membership in professional organizations, trips to conferences, or reimbursement for graduate school tuition. If the company has no history of working with instructional designers and no department in place, you might have to work hard to educate and gain the respect of your co-workers. However, in a small company, you will probably have more interactions with managers and more opportunities to demonstrate your

value. In fact, instructional designers who work with many different kinds of internal and external clients have ample opportunities to fully understand the business. You are likely to develop strong communication and management skills, which will be in demand in many leadership positions.

Independent Contractors It's not unusual for an instructional designer to spend at least part of her or his career as an independent contractor. Some designers find this to be a very satisfying work arrangement because it offers opportunities to work in a variety of industries, on different kinds of projects, and with different teams. As a contractor, you usually have control over your hours and working conditions. The disadvantages are that you have to market yourself, you have no employee benefits, and the work can be "feast or famine"—too much to do or too little. You also have to manage your finances and time well. Despite these drawbacks, in the current era of corporate cutbacks, it's reassuring to have a skill set that lends itself to the opportunities of the freelance market.

Most independent contractors or freelancers offer their services to companies and institutions on a project-by-project basis, such as to produce a specific course. For example, a pharmaceutical company may need to train its sales reps on new applications and dosages for a popular drug. The company has an in-house staff, but they don't have time to do the project, so a freelance instructional designer is hired to create the design document, treatment, and storyboards for an e-learning program.

Other companies may hire contractors to work in-house for a set amount of time—say, 10 weeks—either to assist other staff or to produce one or more deliverables. For example, a start-up company readying its product for a pilot test might bring in an instructional designer to develop the materials for the test (akin to a formative evaluation). Because there will be many deliverables and the designer will need to work with a variety of staff members to develop different components, it makes sense for that individual to work on-site, billing at a full-time rate.

As an independent contractor, you may have some ability to negotiate your compensation. You can work on a fixed-payment contract or on a flexible basis, such as by the hour or deliverable. If you can complete the task quickly, it's probably in your best interest to negotiate a fixed price. You can shoot for an hourly-based compensation if you are concerned about the scope of work or if you are worried that the schedule will slip. For example, charge by the hour if you think that the client won't deliver the content on time or your reviewers might be slow in supplying their comments. If clients have to pay for their own delays, they tend also to pay more attention to the schedule.

Promoting Instructional Design

Just because an organization has hired you doesn't mean that everyone will value or understand your role as the designer. The field is still relatively young and still must prove itself in many settings, so consider yourself an ambassador for instructional design. Some people confuse the discipline of instructional design with the implementation of educational technology. Others may have had experiences with designers who lacked strong communication or collaboration skills, hurting the project and team. Regardless of the attitudes your colleagues bring to a project team, you can demonstrate your value.

Whenever you interact with others in an instructional design project, you want to promote your role in a manner consistent with the values of the organization. But you also want your colleagues to understand what you bring to the team. For example, engineers are systems oriented, so they usually will respond to the systems approach in instructional design. If the person you want to influence values organizational effectiveness, explain what you do in terms of increasing organizational effectiveness. If she values the reputation of the organization, present your work in terms of enhancing the company's reputation.

Rothwell and Kazanas (1998) outlined a structured approach to the process of educating others. They observed that in every organization there are individuals with social power—others look up to them and seek their opinions. Rothwell and Kazanas (p. 356) suggested that

Voice of Experience

Who Are You, and What Do You Do?

A video production company was branching out into the new world of interactive media. They started by hiring a team of instructional designers. One of the video producers sent the designers a memo addressed to "The Industrial Design Dept." Another staff member appeared at the design department's door one day and peered in quizzically. The designers sat at their computers, conducted long telephone conference calls, and pored through thick reference volumes. The walls were covered with flip chart pages full of flowcharts. She asked, "What exactly do you guys do in here?" Clearly, the work the designers were doing was not obvious to their colleagues.

you identify these opinion leaders and seek answers to three questions:

- What special interests exist in this group that might lead its members to explore—and perhaps support—a rigorous, professional approach to instructional design?
- How might the members of this group benefit from a rigorous approach to instructional design?
- What would opinion leaders in this group need to know to be persuaded to support such an approach?

After you have answered these questions, you can develop a plan to promote professional instructional design within the organization. Your strategies may include routing articles about instructional design to opinion leaders, bringing in outside speakers, developing cost-benefit reports, and gathering testimonials from satisfied clients, SMEs, and learners (Rothwell & Kazanas, 1998).

If you have the time and authorization to do so, schedule a one- or two-hour workshop on instructional design for the team including your clients and SMEs. You might devise a simple, even obvious, instructional design problem that could reasonably be completed in a brief time. Choose something that everyone in the group knows something about, such as “how to use an ATM machine,” “recycling in your neighborhood,” or “sections of the newspaper.” Develop a handout or packet of forms for participants to use during the workshop.

At the event, have participants work, individually or in pairs, through each phase of the instructional design process. This experience will not only enlighten the team but help them make better contributions to your work.

Although this book presents an instructional design model with five elements and five phases, as you work on various projects in different environments, you are likely to encounter many other models (also discussed in Chapter 1). You may be employed by a company that follows another instructional design model, perhaps one that the company has developed specifically for its learners and content. Most of these instructional design models follow the same general principles presented in this book but emphasize different strategies or steps. The spiral model was designed to reflect the way many designers actually perform their work, considering each of the essential elements in each phase of the design cycle, and building on their understanding as the spiral loops out from the center. If you use other models, be aware of how they address the five essential elements and the five phases of design. Above all, use the terminology and model that is most appropriate for the setting in which you are employed.

If you are among the first instructional designers at your company, you may be able to develop and implement design standards and procedures. You can develop a proposal for your supervisors that spells out what will be involved in developing standards and how the

Other Models

A short bit of library investigation on the topic of instructional design will yield many, many design models.¹ Below, four of the many alternatives to the spiral model presented in this text are briefly discussed.²

Dick, Carey, and Carey Model

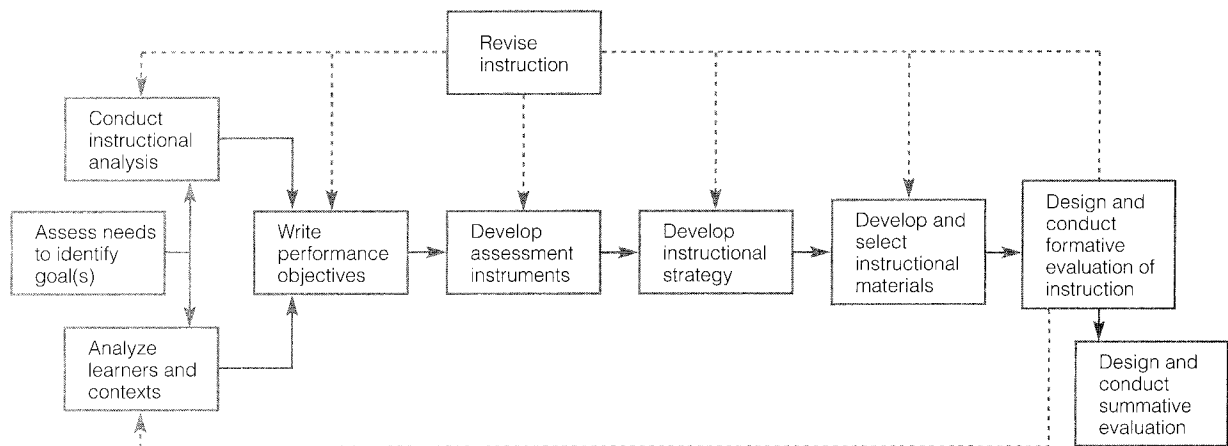
Walt Dick and Lou Carey began teaching their model in 1968 at Florida State University (Dick, Carey, & Carey, 2001). Their textbook *The Systematic Design of Instruction* has introduced thousands of students to the field of instructional design. Although their model is usually thought of as a linear sequence, Dick, Carey, and Carey emphasize that instructional design is a system with a built-in feedback loop. They stress the need to obtain feedback and to revise deliverables based on that feedback throughout the process. Notice how

all the components of the Dick, Carey, and Carey sequence model are addressed in the spiral model presented in this text (see figure).

Willis's R2D2 Model

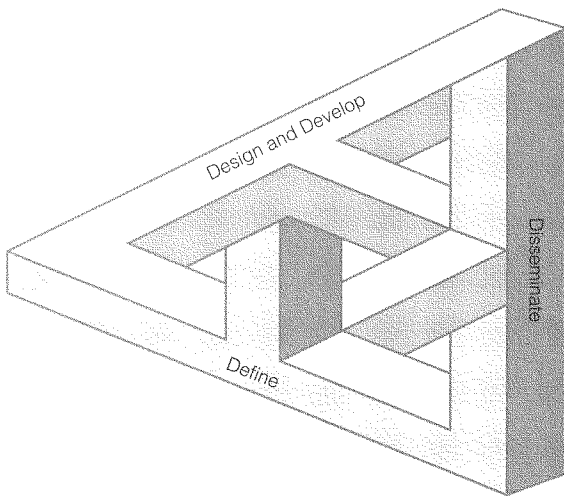
Jerry Willis (1995) developed his R2D2 (recursive, reflective design and development) model at the University of Houston and NASA's Johnson Space Center. Willis wanted to counter the linear limitations of other models with a process that is recursive, reflective, and participatory. Willis's model identifies the three focal points of Define, Design and Develop, and Disseminate (see figure). An instructional designer should work on all three areas in an iterative fashion. Willis's focal points align with the five phases—Define, Design, Demonstrate, Develop, and

(continued on page 281)



The Dick, Carey, and Carey model is a classic model of instructional systems design.

SOURCE: From Walter Dick, Lou Carey, James O. Carey, *The Systematic Design of Education*, 5th ed. (Boston, MA: Allyn and Bacon, 2001). Copyright © 2001 by Pearson Education. Adapted by permission of the publisher.



The R2D2 model emphasizes a nonlinear, iterative process.

SOURCE: From Jerry Willis, "A Recursive, Reflective Instructional Design Model Based on Constructivist-Interpretivist Theory," *Educational Technology*, Nov./Dec. 1995: 5–23. Reprinted with permission.

Deliver—used in this textbook. He also addresses the collaborative and iterative nature of instructional design as it is presented in this book, and he uses the concept of a spiral to describe the process of design.

Tessmer and Wedman's Layers-of-Necessity Model

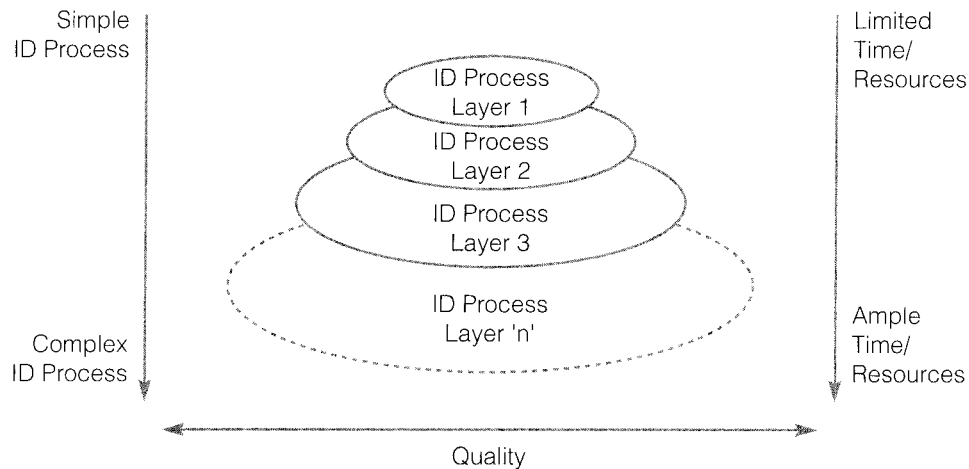
Martin Tessmer and John Wedman (1990) developed the "layers-of-necessity" model to counter the inflexibility they saw in other

instructional design models and reflect the realities of working in "the real world." They see instructional design as consisting of layers of interrelated tasks, with each layer representing increased complexity (see figure). Tasks of a layer may include situational assessment, goal analysis, instructional strategy development, materials development, and evaluation and revision. Although they are careful not to prescribe specific activities for each layer, they emphasize that the output of the tasks at each layer should be consistent with each other. In other words, if the designer performs the tasks mentioned above, the materials should be consistent with the instructional goals and strategy, appropriate to the situation, and evaluated and revised. Above all, designers should allocate their time to the tasks that have the greatest instructional benefits. As time and resources allow, additional "layers" of design and development tasks can be added.

Tripp and Bichelmeyer's Rapid Prototyping Model

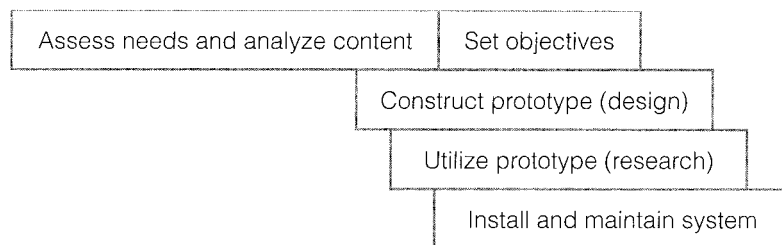
Acknowledging the efficiency with which modern software allows designers to create and modify prototypes, S. Tripp and B. Bichelmeyer (1990) proposed using rapid prototyping as an instructional design model, especially when creating computer-based materials. According to this model, learners' needs, the content, and objectives are determined as the prototype is

(continued on page 282)

(continued)

The layers-of-necessity model illustrates that designers perform tasks as resources and time permit.

SOURCE: From Martin Tessmer and John F. Wedman, "A Layers-of-Necessity Instructional Development Model," *Educational Technology Research and Development*, Spring 1990: 77–85. Reprinted with permission.



The Rapid prototyping model, emphasizes feedback from learners early in the design process.

SOURCE: From S. Tripp and B. Bichelmeyer, "Rapid Prototyping: An Alternative Instructional Design Strategy," *Educational Technology Research and Development*, Spring 1990: 31–44. Reprinted with permission.

constructed and utilized rather than prior to development (see figure). Rapid prototyping is based on the philosophy that instructional situations are complex and that spending a great deal of time on front-end analysis without consulting learners

lengthens the time required for a design project without necessarily creating a better product. Tripp and Bichelmeyer emphasize that testing instructional materials that are near completion, as in formative evaluation, is not as efficient as rapid prototyping.

company will benefit. Try to state the benefits in terms that your managers will appreciate—in other words, how will it improve the bottom line? The most significant benefit is likely to be faster development of effective instructional materials and systematic design standards and procedures that allow the design team to be more productive and ensure that trainees will

be better prepared in transferring their new skills to the workplace.

In addition to promoting the practice and value of instructional design within your organization, you want to find ways to promote recognition of your contributions. You need to exercise some caution here—you don't want to become so associated with self-promotion that

your message is dismissed as mere aggrandizement. Be sure to always deliver substantive and effective work products, to recognize the contributions of colleagues and peers, and to restrict your self-promotion to appropriate venues. That said, don't hesitate to build your name recognition. Consider these opportunities:

- Write a monthly, or perhaps quarterly, e-mail newsletter on instructional design news and tips and circulate to decision makers and colleagues.
- Write articles on instructional design for publications or forums such as your company's internal newsletters and Web sites, local newspapers, and professional journals.
- Offer to give lunch-hour talks and workshops.
- Speak at meetings of local professional organizations.
- Submit proposals to speak at conferences.
- Mentor students at nearby colleges and sponsor interns at your company.

Ultimately, what wins adherents to instructional design is the quality of your work. Your professionalism, communication and collaboration skills, problem solving, and proactive approach, as well as the products you develop, are what convince colleagues that instructional design is valuable. There is no substitute for substance.

Keeping Up with the Field

Those of us who work in technology-dependent areas have to try especially hard to keep up with technical innovations and developments in our field. When we began working in instructional design, there were few personal

computers and no public Internet. In less than 20 years, the field has changed dramatically. How to cope? There are many ways to work at this, but no single method can keep you completely current.

Numerous professional organizations hold conferences and provide publications and online resources. The largest organizations are the Association for Educational Communications and Technology (AECT), the primary academic association serving the instructional design field; the American Society for Training and Development (ASTD), the largest professional association serving the training community; the International Society for Performance and Instruction (ISPI) serving professionals interested in workplace performance, which can include instruction; and the International Society for Technology in Education (ISTE), which focuses on the effective use of technology in K-12 education. Your community may have local professional organizations that sponsor presentations, online forums, workshops, or networking meetings. Get involved by offering to serve on a board, organize a program or workshop, or give a presentation. You might also write articles for association newsletters, journals, or other publications. Many associations, both locally and nationally, invite designers to apply to become judges for instructional product awards programs. Judging is difficult work, but the experience can be highly rewarding.

As you consider where you want to go in your career, you might identify people you admire and try to arrange an informational interview. Call and ask if you can spend 20 or so minutes talking about instructional design practice. Even busy people often will grant this request, which gives you an opportunity to ask questions about the industry. It also allows you to introduce yourself to a

A Personal Journey

by Katherine Cennamo

I began my career as an elementary school teacher, moved on to directing the media support services at a small college, and eventually ended up as a university professor. Along the way, I've designed and developed classroom instruction, videotapes, multimedia products, and online courses for groups as diverse as automotive manufacturers, elderly patients, and university students.

I've found that instructional design is the perfect profession for those who enjoy learning. As I've designed instruction for various clients, I've learned about child development, water treatment plants, signs of child abuse, and a wide variety of other topics. Designers also must have excellent problem-solving skills.

When software is unstable, SMEs are reluctant, and deadlines are looming, designers must be able to reconsider options and find a way to move the project forward despite the obstacles. They must be comfortable with some ambiguity and enjoy creating order out of the initial chaos. Instructional design requires the ability to look at situations as though through a zoom lens—to zoom out and see the big picture, and then to zoom in and attend to all the details required to design and develop a successful product. There is a sense of accomplishment when one project draws to an end and a sense of excitement when another one begins. It's always challenging, sometimes frustrating, but consistently rewarding. May you find it as enjoyable as I have!

House Analogy

Just as some instructional designers specialize in certain kinds of projects or types of design, architects usually specialize in types of buildings and styles of architecture. An architect might focus on designing restaurants or hospitals, or renovating historic homes, just as an instructional designer might focus on technical training, or workforce development, or programs for early learners. Architects work in many types of offices ranging from large construction companies, to design studios, to solo practices. In your instructional design career, you might work for a large consulting firm, an academic institution, or a multimedia developer, or as an independent contractor. You might find a company that's

a perfect fit for your skills and goals, and spend a rewarding career there. Or you might find that different employers meet your career needs at different points in your development.

Just as an architect may need to promote the benefits of a custom-designed house, you may need to promote the benefits of systematically designed instruction to employers and clients. Methods of home design and construction have changed over the years, and methods of designing, developing, and delivering instructional materials have changed as well. Throughout it all, you need to find ways to keep your skills current in a rapidly changing field.

possible mentor, employer, or other decision maker. You should be sure to arrive on time, dressed professionally, and to adhere strictly to the agreed upon-format and time frame. And follow up with a thank-you note.

The forms in which learning is supported continue to change and evolve, and designers need to apply their skills in new ways, and in new contexts, and using new means of delivery. Throughout it all, the premises of systematic instructional design hold true. You seek information from a variety of resources to develop a product that's focused on the needs and characteristics of learners. You engage in a cycle of review and refinement that brings you from a vague vision to a complete product. You make sure the goals, assessments, and activities of the product are in alignment. And you test the product with learners throughout the design and development cycle in order to deliver an end product of proven effectiveness.

Summary

In this chapter, we discussed issues of importance to your career as a professional instructional designer. We looked at the range of institutions and types of positions that designers hold. We examined the benefits and drawbacks of different settings and types of employment options. And we provided advice on promoting the instructional design process and keeping current in a rapidly changing field. As you work in the profession, you'll adopt instructional design methods and techniques that are effective for you. You'll probably reach a point at which you have internalized the instructional design process and rarely think about the individual steps. At this point, you'll be an expert! We wish you the best of luck as you embark on your professional career!

Notes

¹Summaries of instructional design models were contributed by Charles B. Hodges.

²For an excellent overview of a variety of instructional design models, see Kent L. Gustafson and Robert Branch, *Survey of Instructional Development Models*, 4th ed. (Syracuse, NY: ERIC Clearinghouse on Information and Technology, 2002).

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Application

1. In your reflective journal, summarize the key points of this chapter. How are the ideas presented consistent or inconsistent with your beliefs and prior knowledge? Compare your perceptions of the chapter with those of your classmates in group discussions.
2. Interview several instructional designers who work in different environments. Consider how their jobs are similar and how they are different.
3. Investigate career opportunities for instructional designers by examining Web sites or reading journal articles. What particular skills are needed for each career?
4. In Chapter 1, we asked you to describe what instructional designers do, what their day-to-day work involves, and what skills might be most beneficial. Reread your reflections from Chapter 1. How have your ideas changed throughout the course?
5. Locate several instructional design models. Identify how each model addresses each of the five elements of instructional design discussed in this book.