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# INSTRUCTIONAL DESIGN AND IMPLEMENTATION: THE TOOLS FOR CREATING A TRAINING CURRICULUM

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LEARNING & DEVELOPMENT

**TRAIN THE TRAINER**

**VOLUME 2**

**INSTRUCTIONAL DESIGN AND IMPLEMENTATION:**

**THE TOOLS FOR CREATING A TRAINING CURRICULUM**



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# INSTRUCTIONAL DESIGN AND IMPLEMENTATION: THE TOOLS FOR CREATING A TRAINING CURRICULUM



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# **The Basics of ISD**

## **Revisited**

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**AUTHOR**

**Chuck Hodell, PhD**

Chuck Hodell is associate director and faculty with the Graduate Program in Instructional Systems Development at UMBC (University of Maryland, Baltimore Campus) as well as affiliate assistant professor of the Language Literacy and Culture Ph.D. Program at the university. He has written extensively in the field of instructional design and has completed the third edition of his bestselling book, *ISD from the Ground Up: A No-Nonsense Approach to Instructional Design* (ASTD Press, forthcoming 2011). He can be reached at hodell@umbc.edu.

**Editor and ASTD Press Manager**

Jacqueline Edlund-Braun

**Production Design**

Kathleen Schaner



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# THE BASICS OF ISD REVISITED

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Instructional Systems Development (ISD) is the gold standard for curriculum development professionals in every aspect of education and training. From a quick training course for volunteers at a community youth sports team to the most sophisticated simulations and college courses, ISD provides the design framework that professionals trust, and corporations, nonprofits, apprenticeship programs, military, and academic organizations are now insisting on for their programs.

From humble origins during the training-rich war years of the early 1940s, ISD has now evolved to consume the professional careers of seasoned instructional designers and entire graduate school programs at several leading universities. The beauty of ISD is that even a little knowledge pays major dividends when designing curriculum, and designers with advanced degrees are managing multi-million-dollar training programs around the world.

At this point you are probably thinking, “So what’s the magic with ISD?” The quick answer is that ISD combines a systems design environment with the latest learning practices and implementation variables. From social media to online courses, ISD’s reliance on practical and proven curriculum design processes allows a quick adoption of the latest trends while also providing traditional classroom courses with cutting-edge design techniques. All this is possible because a system’s approach to curriculum design means that every variable from learner to delivery system is based on careful analysis and informed decisions.

The other magical element of ISD is that every aspect of the design process is driven by detailed behavioral objectives and evaluation tools. This guarantees that learners are never an afterthought and organizations never forfeit valuable time or resources on shoddy and unproductive learning efforts because results are observable and measurable.

This *Infoline* sets the stage for ISD by first explaining its origin and approach and then presenting the classic ADDIE Model, with each phase of the model discussed in turn. Then it examines the role that objectives and evaluation play in instructional design as well as new developments in emerging technologies and ISD quality control. Finally, it concludes with suggestions that help you put it all together and get started.

## A SYSTEMS APPROACH TO CURRICULUM DEVELOPMENT

ISD is a systems approach to analyzing, designing, developing, implementing, and evaluating any instructional experience. Its DNA is can be traced back to the earliest system theorists, especially Ludwig von Bertalanffy (1950). Centuries earlier, Aristotle summed up system’s theory best when he wrote that “the whole is greater than the sum of its parts.” With ISD, the elements of analysis, design, development, implementation, and evaluation will always create a better instructional product than is possible by leaving any of these elements out of the design process.

ISD is a complex adaptive system in that instructional designers learn and adapt to changes in instructional systems elements to improve instructional products. While some have been quick to criticize ISD for its perceived rigidity related to a systems approach, they fail to realize that ISD allows incredible flexibility, and designers actually learn and adapt from each new variation in population, content, or delivery system. This is critical when new technologies enter the design landscape. You only need to look at the recent seachange in design involving online learning, social media, and smartphone technology for examples. Whatever comes next, ISD will be waiting with a plan and an instructional product.

## DO YOU NEED TO BE A SME?

One of the first questions usually asked by new ISD students relates to a common misconception concerning whether you need to be a subject matter expert before you can design curriculum in any given subject matter. The myth of having to be a subject matter expert (SME, pronounced *sh-mee*) to design curriculum is exactly that—a myth.

While a little subject matter expertise may be helpful, it is not a requirement for success. Every day, ISD practitioners design exciting and successful curricula in subject areas that are only vaguely familiar to them. Remember, ISD is a systems approach to developing training, and the “system” includes methods of working with folks that are SMEs. Most SMEs, in fact, really appreciate the ISD process; once freed of the responsibility of designing curricula, they can concentrate on the subject matter while you worry about that “design stuff.”

This is analogous to the relationship many of us have with machinery—especially cars and computers. For the most part, we have no real knowledge of these technologies beyond what is called the “appliance operator” mode. In other words, we can turn them on, hope they work, and then use them to our own ends. We don’t need to know how many volts of electricity power a certain microprocessor requires or how many pints of green stuff need to be in our car’s radiator. We only need to know whom to ask when we need help, especially when we get the “fatal error” message on our computer monitor or when the green stuff that was once happily circulating in our cars is now dripping onto our driveway.

For more on successful partnerships with SMEs, see *Designer-SME Collaboration* (no. 251005).

The systems approach operates on certain basic principles. If you are a “systems” thinker, you already know that systems are present in every facet of our lives. We elect our representatives in the political system, and we prosecute them in the legal system. We pay taxes as a result of the legislative system, and we travel from place to place as a result of a transportation system. Instructional systems are no different in theory than any other system—only the details change.

The reason training and education work so well in a systems environment goes to the very essence of systems themselves. The systems that seem to work best are those that have observable, measurable, and replicable elements. In the case of ISD, these elements include analytical methods, objectives, evaluation schemes, design plans, and a number of other system components.

While ISD is a system, it is not so rigid that it lacks flexibility. In fact, the more you work with ISD, the more you realize that the system allows you greater opportunities to be creative. For example, a system-less training organization with an intra-organizational communications problem might decline to pursue that “analysis and evaluation stuff” and concentrate on creating attractive participant materials and a video that features the company CEO looking casual, sitting on the corner of his or her desk. This is what I refer to as the four-color and Hollywood approach to training—all flash and no substance. A systems approach that contains analysis and evaluation allows for creativity necessary to focus on the real workplace issues and provide solutions that can be evaluated and replicated across the organization, proffering some assurance that the intervention was worth the monies and resources expended.

Before going any further into ISD, it is important to herald the universality of this process. The notion that ISD only works in training environments is as accurate as saying that maps only work if you are driving a red sports car in towns with a population of fewer than 500. The process of assembling a curriculum is built on the same concepts and principles. This applies to whether you are designing an English-as-a-second-language course, a third-grade reading lesson, or a jet airline simulator. The variables that exist in any curriculum design process, including population variables, delivery systems, and resources, are just that—variables.

## THE ADDIE MODEL OF ISD

There are a number of ISD models named after individuals and institutions, but we are going to use the generic, or ADDIE, model as our point of reference (see sidebar). ADDIE represents the first letter contained in each of the five separate elements of this model:

- Analysis
- Design
- Development
- Implementation
- Evaluation.

Most instructional designers use the ADDIE model or some variation of it as a basis for their work. Eventually, most experienced designers adopt their own unique models—customized to fit their work styles and the demands of their clients or organizations.

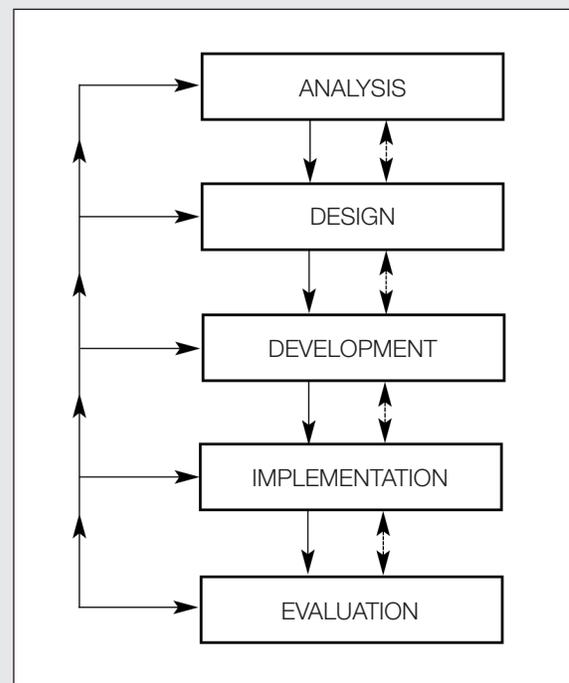
Below is a short profile of each component. A more detailed and in-depth explanation then follows.

### ANALYSIS

Analysis is the who, what, where, when, why, and by whom of the design process. In this element you must determine

- if a problem exists that can be appropriately addressed by training
- what goals and objectives the training should address
- what resources are available for the project
- who requires the training and their needs (population profiles)
- any additional data needed to successfully complete the project.

## THE ADDIE MODEL



### DESIGN

Design is the real heart of the instructional design process. As the designer, you will

- prepare instructional objectives
- develop instructional evaluation techniques and tasks
- create a program evaluation plan
- determine the sequence and structure of the course
- prepare logic and objectives maps
- draft necessary materials.

# Aligning Training and Client Expectations

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**AUTHOR**

**Michael Brenner**

Michael Brenner, EdD, is the president of Right Chord Leadership, a company dedicated to helping people work in harmony. He is also the 2014 president of the Greater Philadelphia chapter of ASTD, an instructor of organizational behavior at Immaculata University, and a professional musician with 25 years of performance experience.

**Community Manager, Management**

Ron Lippock

**Editor, Infoline**

Patty Gaul

**Associate Editor**

Sarah Cough

**Production Design**

Kristie Carter-George

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**H**ow many times have you received a call from a client (or a prospective client) asking you for “team building”? You say you’re interested in the assignment and ask what precipitated the need for the session.

You receive a vague answer, often centered on one of a handful of common themes including “an employee with a bad attitude affecting the morale of the entire team” or “a manager who senses she is losing control of the team.”

You know that a team building session is unlikely to address the problem that’s been described and, consequently, the client is bound to be disappointed. How can you ensure that both you and the client are satisfied upon completion of the engagement? This is where the notion of alignment comes into play.

Think about your car for a moment. Wheel alignment is part of normal maintenance because it reduces tire wear and ensures that your vehicle doesn’t pull to one side or the other. It keeps your car traveling straight. In a training context, alignment refers to how well-matched your deliverables are with your client’s expectations. The more aligned they are, the better the outcome. Aligning your deliverables with your client’s expectations keeps your training “straight,” that is, solving the very problems your client wants solved.

But alignment doesn’t just happen. It’s the result of asking the right questions, anticipating obstacles, and communicating with honesty and clarity. This *Infoline* focuses on what trainers need to consider in order to achieve alignment—and outstanding results. You will learn how to:

- Engage your client from the very start.
- Develop a sound contract.
- Get clarity on the real problem.
- Effectively collect data through various methods.
- Share your recommendations with the client.
- Implement your training intervention.
- Follow up to ensure you’re on track.

Throughout this *Infoline*, you will find sidebars and checklists that can be used as handy references before, during, and after your engagements.

## SETTING THE STAGE WITH HEART

Setting the stage for proper alignment begins with HEART, which refers to an attitude that must exist within you before you proceed with any client engagement. When you set the stage with HEART, you look inside yourself first and ensure your own values are aligned with the kind of trainer you want to be. HEART is an acronym for honesty, empathy, accountability, resilience, and trustworthiness. I call these the five essential qualities of successful trainers. The extent to which you lay the groundwork with HEART will largely determine the success of your training. Let’s discuss each in turn.

### Honesty

In his song “Honesty,” Billy Joel sings: “Honesty is such a lonely word/Everyone is so untrue.” It’s a sentiment that could apply as easily to a trainer-client relationship as to a romantic one. Being an honest trainer means more than simply abstaining from dishonesty (which of course has no place in any professional setting). It means being up front and forthright with your own expectations, needs, and preferences. It means setting clear boundaries regarding what you are responsible for and what the client is responsible for. And it means encouraging the client to be honest with you about any concerns or issues that may arise so you can address them quickly and effectively.

As Peter Block writes in his classic book *Flawless Consulting*:

*It’s easy to fall into a service mentality, in which you see yourself charged with solving the client’s problems and serving the client’s needs—and it’s possible to act in such a way that you, as the consultant, appear not to have any needs. The reality is that you do have needs. . . . Skill in consulting is not only skill in providing a program, a process, and procedures that respond to the client’s needs. It’s also your skill in being able*

## RESPONSIBILITY VERSUS ACCOUNTABILITY



In making the distinction between responsibility and accountability, I often use a football analogy. The players are responsible for the blocking, tackling, passing, running, and scoring that takes place during a game. But the coach is accountable for what happens on the field, court, or rink. Think about it—the coach never sets foot onto the playing area and yet he is the one carried off on players' shoulders after a championship win—and the one who must look for new employment after a dreadful season. He is the one who must be able to give an account of everything that happens regarding his team, on and off the field—to his boss, the media, and the fans. That's what being accountable is all about.

*to identify and put into words the issues around  
... your own needs.*

In their desire for business, some trainers seek to placate the client at all costs. This almost always backfires as misunderstandings and disagreements inevitably arise. Keep in mind, however, that some clients may not be accustomed to the honest approach. They may be used to calling the shots when working with trainers and reluctant to address your concerns. When this happens, you need to decide whether to continue the relationship.

At a minimum, clients and trainers should be on the same page with respect to expected results, communication requirements, and anticipated internal challenges. (See Job Aid, Questions to Ask a Prospective Client.)

### Empathy

Effective training starts with empathy, putting yourself in the shoes of the client and making an effort to understand their "pain." Daniel Goleman, author of several books on emotional intelligence, suggests that "empathy represents the foundation skill for all the social competencies important for work." Empathizing with a client can be especially difficult if you don't see their problem as significant

or worthy of an intervention. If that's the case, try to imagine what may be stake for them:

- Are they in danger of losing their employees' respect or trust?
- Could they be seen as less competent or capable by their superiors?
- Is the problem causing them increased stress and fatigue?
- Is the problem resulting in greater turnover?
- Is the problem distracting them from more critical issues requiring their attention?

Imagine their day and the burden this problem places on them. Adopt the mindset that "if it's important to them, it's important to you." Demonstrating empathy is a necessary ingredient to any successful training engagement.

### Accountability

Trainers need to be more than responsible for their actions—they must be accountable for what transpires throughout the course of the client engagement. This does not mean you are responsible for whatever agreements or promises the client makes. After all, trainers have no control over what a client does or doesn't do. But in the event an intervention fails—the client doesn't follow through on a crucial task, fails to provide necessary resources, or skips off to Paris for three months without notice—the trainer must be able to clearly explain the actions and decisions that led to the breakdown. He must be able to answer the question, "Why didn't this intervention succeed?" with all the clarity of a top-notch journalist. Doing so not only protects the trainer from unfair blame but, perhaps more importantly, provides an account (there's that word again) for the client as to how and why things went awry. When things don't go as planned, helping a client identify and avoid pitfalls in the future can have enormous value and solidify the trainer-client relationship.

### Resilience

Clients are people, and people change their minds, get cold feet, reverse course, act irrationally, and make mistakes. That's why resilience is so important

for trainers. Resilience describes the mental and emotional toughness needed to roll with changing priorities and adapt to shifting circumstances. Trainers should reflect on the following questions:

- How will I handle client resistance when (not if) it occurs?
- Am I willing to be flexible and not jump to conclusions or make assumptions?
- Have I adopted a curious mindset that includes asking questions to get the full story?
- Am I ready to be supportive and offer solutions?
- Am I prepared to walk away from the engagement if necessary?

## Trustworthiness

Trustworthiness is one of the most important qualities of any successful trainer. But it's not something you can demonstrate only part of the time. Because trust takes years to build and only a moment to destroy, clients must know they can trust you all of the time. They must have confidence that you will always do the right thing by them. As soon as a client finds opportunity to question your trustworthiness, it's all over.

Trustworthiness has many dimensions, including your character, credibility, and reputation. As such, it is almost impossible to teach someone to be trustworthy; the choice to be trustworthy or not is one each of us alone must make. However, here are a few simple trust principles for you to consider:

- People trust you based on what they see, not on what they hear or what they're told.
- Trustworthiness is an either/or proposition. You can't be trustworthy on a part-time basis.
- Learning to apologize and learning to forgive are two of the most powerful trust builders.
- There is no quicker way to build trust than to make a habit of asking, "What can I do to support you?" and then following through.
- "The best way to convince a skeptic that you are trustworthy and generous is to be trustworthy and generous." —Steven Pinker, author

## CONTRACTING

In *Flawless Consulting*, Block asserts that "[H]aving direct discussions with the client—about control, vulnerability, your wants, the chance of success, and how the discussion is going—makes the difference between an average contracting meeting and an excellent one." But developing a successful contract doesn't end there. The following list of important action steps, while not exhaustive, is a good place to start.

### Get the Contract in Writing

This helps clarify the parameters and expectations of the training program and reduces the chance of confusion and miscommunication. Handshakes and verbal agreements won't cut it. There have been many times in my career when I was both relieved and fortunate to have had a contract in writing.

### Begin by Clarifying the Problem or Issue

State what you are going to focus on. For example: "The trainer will develop and facilitate a two-day program on improving interpersonal communication for marketing supervisors. This intervention will include five modules consisting of the following topics . . ."

### Specify What You Want From the Client

Your wants could include information, resources, access to staff and facilities, follow up meetings, or some other type of support. Think through what you want (or need) from the client carefully. The more precise you are at this stage of the engagement, the less chance for frustration down the road.

### Spell Out What You Intend to Deliver

If the deliverable is a written report, for example, what will it include? How will it be presented? Will you walk the client through it or simply hand it over? Will it include general suggestions or specific action steps? Details such as these may seem trivial, but they are not. Being as clear as possible will facilitate

# Scenario-Based E-Learning

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**AUTHOR**

**Ken Spero**

Ken Spero has been designing, developing and delivering simulations both online and in the classroom for over 20 years. Currently, he is the executive director of the new Immersive Learning University. In this role, he is able to continue simulation evangelizing activities by making the creation and use of immersive learning simulations more available to the masses. A faculty member at the University of Pennsylvania's Penn CLO Doctoral Program, and also the Med Ed Master's Program for Physician Educators, Ken is a frequent presenter at learning conferences.

**Community Manager,  
Learning Technologies**

Justin Brusino

**Editor, *Infoline***

Phaedra Brotherton

**Associate Editor**

Stephanie Castellano

**Production Design**

Marisa Kelly

# SCENARIO-BASED E-LEARNING

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In the effort to find new and interesting ways to design and deploy content to our targeted audiences, we seem to forget the old adage, “Experience is the best teacher.” Historically, when some one needed to develop demonstrable expertise in a profession, they undertook an apprenticeship to learn by doing. It is still true that when it comes to applying what is learned back on the job, there is no replacement for experience. Experience is still the best teacher when learning a new process and even more so when facilitating a change in behavior or skills.

If we need employees to do their usual jobs differently, simply telling them how may not be enough. The dual challenge of teaching them the new way and also working against their internal inertia to do things in the manner to which they are used requires more than instruction. It requires an experiential approach that is designed and deployed for scalability.

Enter simulations, which can be thought of as focused “apprenticeships in a box.” There are many different kinds of simulations, but in this *Infoline* we will focus on computer-based behavioral or scenario-branching exercises, which address the issues of scalability and context. However, much of the information presented in this issue can be applied to live simulations as well.

In this *Infoline*, you will learn about

- the power of simulations to capture and provide practical experience
- the basics of designing a computer-based simulation
- how to develop complex and engaging scenarios.

*Scenario-based simulations* are a set of scenarios that take place over time and are linked via a defined scorecard or set of learning objectives. In scenario-based simulations, training participants typically take over the responsibilities of a worker or manager and are placed into situations where they have to make the same kinds of decisions that a person

in that role would make in real life. This can be a simulated hour, week, or even a year depending on the focus of the learning objectives and the nature of the experience that participants need to have. Either way, participants navigate an increasingly complex decision tree in which each decision they make determines the branch that they will continue to follow as they progress through the scenarios.

Our most memorable experiences are often made up of a number of discreet events or scenarios that are linked in some way and play out over time. When we are in the process of experiencing something, these links are usually not discernible. However, when we repeat similar experiences we begin to be able to detect patterns and learn the appropriate responses and behaviors. Like these real-life experiences, simulations are made up of a series of scenarios that play out over time; the difference is that they are constructed intentionally.

Our key objective in developing any exercise is to enable our students to retrieve the information or insights gained from the exercise when they need it, and use it to improve their performance. The more we engage students, the more likely they are to retain information and apply it when needed. In other words, your goal is to move learners along this continuum:

**Engagement > Retention > Retrieval**

## BENEFITS OF SCENARIO-BASED LEARNING

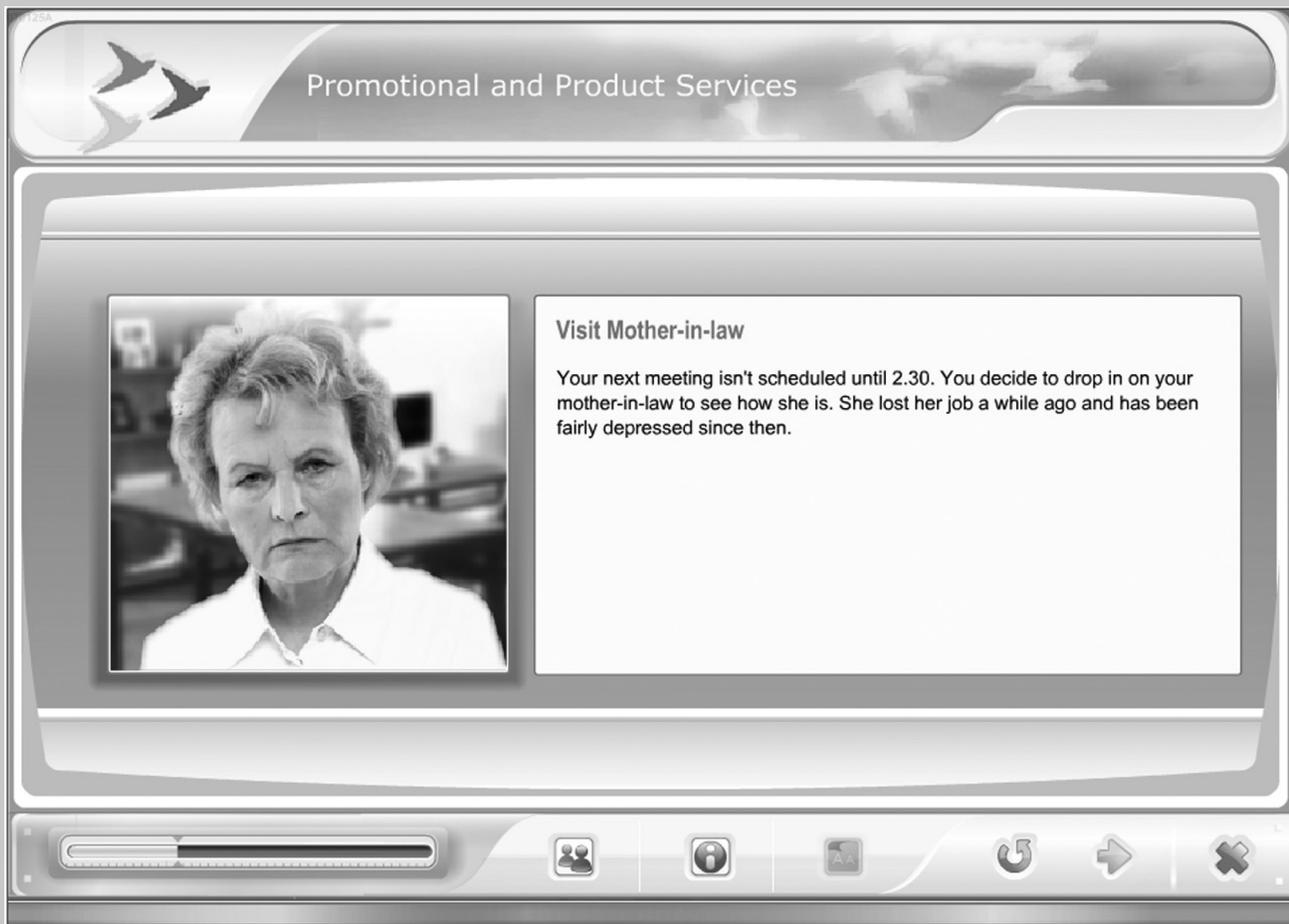
Simulations and scenario-based learning have the following benefits that make them particularly effective and unique:

### They Are a Form of Storytelling

Simulations can be very powerful from an engagement perspective due to their underlying stories. There is a narrative that is captured in the scenario or simulation and it is going to unfold through the students’ engagement with it.

*(Text continued on page 47)*

## CASE STUDY: THE MOTHER-IN-LAW SCENARIO



This scenario-based simulation was designed for a pharmaceutical company that had been cited for a compliance infringement, and needed its employees to go through mandated compliance training. Taking a holistic view of the challenge, the client felt that the infringement was indicative of an underlying behavioral problem in their company. The problem was that employees had to deal with ethical issues, and decisions they were making that seemed like “the right thing to do” were often actually illegal. It was not enough to simply tell employees what was right and wrong, because there was a strong chance that they would continue to make the wrong decisions out of both habit and moral inclination. Therefore, the client decided that a scenario-based simulation was called for, which would convey information and provide interactivity.

One of the scenarios that we developed became affectionately known as the “Mother-in-Law Scenario.” In the scene, as the simulation character, you are a salesperson and your mother-in-law actually takes the medication that you detail. She informs you that she has lost her medical coverage and has run out of her meds. Knowing that you carry samples, she asks you for some. The choices in our design were a simple “yes” or “no” with some description included. It is illegal to give her samples, as only a physician can prescribe and provide access to medication; however, it is your mother-in-law, and she is in need, so what do you do? This is an example of how even relatively complex challenges can be presented in a relatively simple scenario that utilizes basic design principles to engage the student.

# CRITICAL THINKING IN SCENARIOS



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