## CHUCK HODELL, PHD



# Introduction to Instructional Systems Design

Theory and Practice

Instructor Guide

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### CHAPTER 1 The Journey to Instructional Systems Development

#### Instructor's Overview

In this chapter, the student will explore the foundational concepts of instructional design. This is a more theoretical chapter than most of this text, but it is important to establish that instructional design comes from a very long and established history of creating learning.

The more students can appreciate the fact that ISD is a science and comes from a vibrant theoretical and practical history, the easier it is to dig into the more practitioner-based aspects of the field in later chapters.

The eight generations of learning concept is new to the study of ISD and is appearing for the first time in this text. This is an important concept for students to appreciate that instructional design began at the earliest moments of prehistoric learning and continues improving with each new advance in technology and learning theory.

The list of careers in ISD opens the door to a discussion of ISD careers and jobs that might not be immediately recognizable to students as related to ISD.

### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

### **Reflection Questions**

**First sidebar:** Both questions ask learners to reflect on the eight generations of learning transfer and what they think might be coming down the line. Both are excellent for in-class large-group discussions or for group discussions in synchronous online environments.

**Second sidebar:** Systems theory is at the very heart of ISD; asking students to reflect on systems in general and specifically the systems that are important in their lives is a great way to link the theory to instructional design.

### **Discussion Questions**

### DQ 1. How is learning different today than 50,000 years ago as it relates to how a student receives and processes information?

This is a key question as it relates to learning transfer and instructional design. Students will need to think about whether learning is based on a process that is independent of any learning technology.

### DQ 2. When reviewing the eight generations of learning transfer, which is the most impactful on the learning process?

In this question, students will consider the idea that one generation of learning transfer had more impact than any of the others.

#### DQ 3. What will likely be the ninth generation of learning transfer?

Students are encouraged to make predictions on the future of learning transfer.

### DQ 4. Does technology change the way people learn?

This is an important element of instructional design, and there is much discussion about the role technology plays in learning transfer.

### DQ 5. Which instructional design knowledge, skills, and abilities are the most important to the work of instructional designers, and why?

In this question, learners are asked to prioritize the aspects of the practice of instructional design that they think are most important.

### DQ 6. How is using a systems approach to designing curricula different than any other methods?

The discussion of systems as the basis of ISD challenges students to consider the other ways that instructional design takes place outside the field of ISD.

#### DQ 7. Is there ever a time when someone is neither a teacher nor a learner?

This question explores learning transfer and asks if there is ever a time when someone is not a teacher or a learner.

#### **Case Studies**

Case study 1 is a typical interorganizational discussion about the merits of ISD.

**Case study 2** represents a community college's struggle to upgrade their courses and materials.

**Case study 3** looks at the challenges a community organization faces when maturing into professionally designed courses.

### Five-Question Quiz (Based on Objectives)

You can add or subtract questions based on your needs.

- 1. Define *learning*.
- 2. Describe the process of learning transfer.
- 3. List one key feature of each of the eight generations of learning transfer.
- 4. Define systems approach.
- 5. List several knowledge areas and skills required of instructional design professionals for competence and mastery.

### **Optional Learner Activities**

Chapter 1 provides several options for independent or group activities for learners, including:

- Ask learners to discuss the ways that learning transfer has influenced the growth of technology, not only in learning but in other aspects of society.
- Have learners take one system in their life, like banking or education, and detail each separate element and how they relate to one another.
- Divide learners into groups and have them each choose one of the generations of learning transfer and have them describe how it evolved and changed the process of learning.

### **Key Concepts**

- Sharing skills and knowledge as an inherent part of life
- Learning as a process
- Learning in formal and informal settings
- Eight generations of learning transfer
- Instructional design as a systems approach to curriculum development
- Instructional design as both science and art
- Impact of programmed learning and the advent of scaling of teaching
- Criterion testing and standards for evaluation of mastery
- Interlocking knowledge and skill areas required of an ISD practitioner
- Infinite landscape of ISD careers

### **Chapter Objectives**

At the end of this chapter, the learner should be able to:

- Define learning.
- Describe the process of learning transfer.
- Define instructional systems development.
- List one key feature of each of the eight generations of learning transfer.
- Give examples of the scope of the field of ISD.
- Define systems approach.
- Define *programmed learning*.
- Cite two examples of how criterion-referenced testing has impacted learning transfer.

- List several knowledge areas and skills required of instructional design professionals for competence and mastery.
- Describe the range of careers available to instructional designers.

### CHAPTER 2 Learning Theory Through the Lens of ISD

#### Instructor's Overview

In the second chapter, students take a deep dive into learning theory specifically as it relates to the practice of instructional design. It is almost impossible to perform ISD work without a very thorough appreciation and knowledge of learning theories like behaviorism and constructivism, as well as all the other theories that add to the foundation of how learning takes place.

In the practice of ISD you will find a range of opinions on which learning theories are preferred by different instructional designers, and learners will often hear of the pluses and minuses of each theory based on the beliefs of those who are discussing it. From a learning perspective, it is important to have a working knowledge of each theory to find the best fit for each combination of content, population, and learning delivery system.

Within this chapter, you will also be able to introduce learners to Bloom's taxonomy, which many believe to be a foundational ISD principle. While there is some discussion among designers that Bloom's framework is somewhat dated, the truth is that his taxonomy is more than a list of verbs; it is actually a way for instructional designers to determine where learners fall on the continuum of novice to experts (covered in more detail in chapter 15 as the content mastery continuum).

No discussion of learning theory should be without some reference to Howard Gardner and his construct of multiple intelligences and how they aid instructional designers in looking at learner capabilities in a new context.

This chapter is rich in theory and builds the bridge to application by providing the nexus between the theory of learning and the application of these ideas to very real populations of learners. Instructional designers, as learners, should be well-versed in these ideas and appreciate the depth of this work and the discussions within the field relating to their usefulness and application within specific, real-world populations.

### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

### **Reflection Question**

**Sidebar:** The discussion of the merits of constructivism and behaviorism is a constant in most debates concerning learning theories. For some instructional designers, this is a very polarizing discussion. Having learners talk about the application of these two approaches is a lot of fun in groups and as a posting requirement in a course.

### **Discussion Questions**

DQ 1. Now that you have reviewed the six major learning theories most often referenced and used in the field of instructional design, which most closely resonates with your feelings about how to best design courses? Why?

This question requires learners to move the theories to practice and consider the operationalization of the elements of each theory. In this discussion it is important to consider variables of the content and population for each specific course design scenario and determine if one size fits all as an instructional designer.

### DQ 2. How do children and adults learn differently and how are the designations of pedagogy and andragogy legitimate instructional design considerations?

This is a fundamental question for instructional designers as they work with different populations of learners. Instructional designers should be able to distinguish the differences they need to consider when designing for K–12 or adults. You can also ask if there are times when there are no differences in designing for these two populations.

### DQ 3. In your opinion, is there anything missing, from a theoretical standpoint, in the six learning theories we have discussed? If so, what?

Asking learners to fill in the blanks on learning theories is always a great way to get them thinking about how they work and what they are trying to accomplish. There can be some very interesting ideas that come out of these discussions and posts.

### DQ 4. Do you believe that the concept of learning styles has any practical usefulness in adult learning populations?

The topic of learning styles can generate a very energetic discussion with learners because there are some very firmly held beliefs within some learners. Allowing for this discussion in a group or as a post often creates a lot of great thoughts and opinions from learners.

### DQ 5. As an instructional designer, how would you implement Gardner's multiple intelligences in the analysis of an adult population of learners?

This is a really powerful discussion or post for learners, especially for those who have never been exposed to Gardner's work. For some, it really creates a path to thinking past the one-dimensional analysis that is often used in ISD to define learner characteristics. This is especially powerful if you include a discussion of why some learners seem to do better in certain content categories than others. For example, why does a student excel in music but can't seem to perform basic math?

### **Case Studies**

**Case study 1** places the learner in the position of taking instructional design skills and applying them to a very real scenario.

**Case study 2** is an extension of the discussion that often takes place in academic circles when the topic of learning styles takes place. It requires learners to think beyond any emotional attachment for or against learning styles.

**Case study 3** dives into the discussion of the differences between learning-centered and teacher-centered instructional design approaches. It allows learners to dig much deeper into the impact of each approach on learners and organizations.

### **Five-Question Quiz (Based on Objectives)**

You can add or subtract questions based on your needs.

- 1. Define *learning theory*.
- 2. List the key components of the following learning theories:
  - Behaviorism
  - Neo-behaviorism
  - Cognitivism
  - Constructivism
  - Connectivism
  - Socioculturalism
- 3. Describe the differences between pedagogy and andragogy.
- 4. Describe the purpose of Bloom's taxonomy.
- 5. Describe the key elements of Gardner's eight multiple intelligences.

### **Optional Learner Activities**

Chapter 2 offers a number of independent or group activities for learners, including:

- Ask learners to design their own learning theory based on what they now know about instructional design.
- Ask learners to present arguments for or against ISD being a science.
- Divide learners into two groups and have them present arguments for or against learning styles being a legitimate design consideration.

### **Key Concepts**

- The science of learning theory
- The link between psychology and learning
- The several different theories of how learning takes place, including:
  - Behaviorism
  - Neo-behaviorism
  - Cognitivism
  - Constructivism
  - Connectivism
  - Socioculturalism
- Cognition as a process
- Metacognition and the process of learning to learn
- Cognitive psychology and its role in instructional design
- The several major differences between pedagogy and andragogy
- Maslow's hierarchy of needs
- Bloom's taxonomy
- Gagné's hierarchy of learning and its role in ISD
- The design differences between teacher- and learner-centered learning approaches
- Learning styles
- Gardner's multiple intelligences and instructional design
- The rule of 3s and the rule of 7s and their place in ISD
- Thiagi's alternative view of the laws of learning

#### **Chapter Objectives**

At the end of this chapter, the learner should be able to:

- Define *learning theory*.
- Describe the key elements of the psychology of learning.
- List the key components of the following learning theories:
  - Behaviorism
  - ° Neo-behaviorism
  - Cognitivism

- Constructivism
- Connectivism
- Socioculturalism
- Define *cognition*.
- Define *metacognition*.
- Define *cognitive psychology*.
- Describe the differences between pedagogy and andragogy.
- List the key elements of Maslow's hierarchy of needs.
- Describe the purpose of Bloom's taxonomy.
- Describe the different levels of Gagné's hierarchy.
- Describe the difference between teacher- and learner-centered learning approaches.
- Present an opinion on the value of learning styles for adult learners.
- Describe the key elements of Gardner's eight multiple intelligences.
- Describe why the rule of 3s and the rule of 7s are related to ISD.
- Describe the key points of Thiagi's laws of learning.

# CHAPTER 3 The Adult Learner

#### Instructor's Overview

Adult learners are a very specific population that most instructional designers will work with in their careers. Many teacher training and other programs geared toward K–12 instructors spend little to no time on this topic. In this chapter, students will be introduced to adults as learners and their unique expectations from their participation in courses and programs.

It is important that instructional designers appreciate that adults are not at all similar to children as a population and a designer who falls back on pedogeological approaches to ISD will find themselves struggling at best. Andragogy and the work of Malcolm Knowles and others have created a path for instructional designers to professionally create learning environments and courses that welcome, encourage, and support adult learners.

This chapter also presents the concept of generational learning so that students can appreciate that generations do in fact have some important design considerations, especially when working with technology. Boomers approach learning a little differently than millennials, and while some generational distinctions are more stereotypical than important in regards to design choices, there are some things to think about when mixing populations in a cohort of learners.

One aspect of the chapter that is important to designers is the discussion of adult learners and the challenges they may face with learning disabilities and other roadblocks to master and sometimes even participation. It is also realistic to consider the impacts of autism, ADHD, and other learning challenges in adults.

### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

### **Reflection Questions**

**First sidebar:** Here we are looking at Knowles and his work as it relates to the practical issues having designers. The question is "How do designers take the theory and incorporate it into the everyday work of designing courses?"

**Second sidebar:** Generations of learners is a very popular topic among designers, and it is always a great conversation for students to engage in to determine for themselves if generations do in fact learn differently.

### **Discussion Questions**

### DQ 1. As an instructional designer, how would you decide what age designates an adult learner from other possible classifications like K–12?

This is a great discussion or posting question since there is always a bit of subjectivity to designating who is and isn't an adult.

### DQ 2. How, as an instructional designer, do you consider the concept of andragogy when designing for adult learners?

This question digs a little deeper into the differences between the professional classifications of pedagogy and andragogy, and you will often have students who think there is no real difference between the two populations.

### DQ 3. Which of the adult learning principles do you think is the most important when designing for adult learners?

When looking at the best design choices and decisions, students get to voice their favorite principles for good design for adults. Always point out that how the designer might best learn is not important when making design decisions for this or any population of learners.

### DQ 4. How does the generation of a learner influence the way they learn or how they should be taught?

If you want a lively discussion or posting exercise, have students talk about their generation and how they best learn. Ask them to determine if there are any real differences that should be addressed when designing for a mixed generation population.

### DQ 5. As an instructional designer, how would you address learning challenges in the course design process?

There are many times when an instructional designer feels like this aspect of a learning population is not something they can easily address in their course design approaches. The more a student thinks about this, the more likely they are to see that there are elements of the design process and finished product that can support learning challenges with adults.

### **Case Studies**

**Case study 1** asks students to think about how adults in a specific age range (55–70) are likely to best learn with this content area. Common discussion include whether classroom or online are better approaches.

**Case study 2** represents a community college's response to having a program's participants feeling disrespected. While the learners are over 35 years old, they think they are being treated like recent high school grads with no life experience. This is a very common design challenge.

**Case study 3** is a very common scenario that designers face when working with organizations in transition or seeking new populations of learners. How can a designer make a convincing argument that the needs of the new population of learners are being addressed in analysis and course design?

### **Five-Question Quiz (Based on Objectives)**

You can add or subtract questions based on your needs.

- 1. Define *adult learning* as a distinct area of interest in ISD.
- 2. Compare and contrast how adults and children learn.
- 3. List and provide examples of adult learning principles.
- 4. List and describe at least three adult learning challenges.
- 5. Describe the impact of adult learning disabilities on instructional design.

### **Optional Learner Activities**

There are several themes in this chapter that present opportunities for lively discussions and posts beyond the quiz and discussion questions:

- Students each choose a content area and then outline how a course design would differ between a K–12 population and an adult population of learners.
- Have students represent their generation and compare and contrast the way they learn compared to another generation. If you only have one or two generations in your group, assign different generations to different students.
- If your students are ready to dig a little deeper into the challenges that adult face as learners, you can assign each student a different learning challenge and have them present some ideas on how a designer can provide support for these specific learners within a population.

### **Key Concepts**

- Andragogy
- Age as a determinate of adult learner populations
- Differences between adult and child learners
- Adult learning principles
- Generational learning as a design consideration
- Addressing adult learning challenges
- Designing for adults with learning disabilities
- Determining how adults learn best

### **Chapter Objectives**

At the end of this chapter, the learner should be able to:

- Define *adult learning* as a distinct area of interest in ISD.
- Determine the age of adulthood for ISD purposes.
- Compare and contrast how adults and children learn.
- List and provide examples of adult learning principles.
- Define the term *generational learning*.
- List and describe at least three adult learning challenges.
- Describe the impact of adult learning disabilities on instructional design.
- Describe at least five methods for teaching adults.

### CHAPTER 4 ADDIE and Other ISD Models

#### Instructor's Overview

ADDIE and all ISD models are considered foundational knowledge required for everyone in the field. It has almost become a litmus test in interviews for people in ISD positions to be able to discuss ADDIE and what it actually represents.

Among instructional designers, there has always been a bit of a difference of opinion on whether too much attention is paid to any ISD model and why they are even necessary beyond a good-to-know level of information. Students need to be able to think through these models and be at least conversational on their purpose and need within the field.

While ADDIE is far and away the most well-known and referenced ISD model, there are literally hundreds of models within the design community. This chapter visits several of the more well-known alternatives to ADDIE, like SAM and rapid prototyping, so that students will have at least heard of them going forward.

From an instructional viewpoint, this chapter is a great opportunity to dig deeper into ISD's core theoretical components without getting lost in too many details. Discussion about models and their use are an interesting assignment for groups or individual thought assignments.

### **Reflection Questions**

**First sidebar:** This is a point of reflection for students and allows them to think about the field and their work in a way that tugs at their creativity and imagination.

**Second sidebar:** ISD models like ADDIE are sometimes represented as being all-inclusive and representative of every variable in instructional design, but is that really the case?

### **Discussion Questions**

#### DQ 1. What is the most important aspect of ISD models for a professional designer?

This question really focuses on why we even talk about ISD models. What about ISD models supports the everyday work of an instructional designer?

### DQ 2. Are models in ISD representative of the fact that instructional design is a system's approach to preparing courses? If so, how do they reflect system's thinking on learning?

Systems thinking and practice exists in every aspect of ISD, and the more students realize the nexus between the theoretical and practical in the system of instructional design, the more they can associate the distinct elements in each design project that are in some way connected.

### DQ 3. Is the ADDIE model too simple or too complicated?

New students in ISD often comment that ISD models are too complicated given the work that is involved in designing a course. This is often related to the complexity of projects that students have worked on, but it is also reflective at some level of the preference for actually performing instructional design as opposed to just talking about it. This question can spark a very informative conversation with students either as a post or within a group.

### DQ 4. When reviewing the ISD models in this chapter, which more closely aligns with your thoughts on what an ISD model should look like? Why?

While this question is somewhat experience-based, even less experienced students will find resonance with some elements of most ISD models. It allows students to

explore their interests and knowledge as it relates to the science of ISD and what each model represents.

### DQ 5. Is there ever a time when a model can be used as a template for designing courses in ISD?

This final discussion question allows for the bridge between theory and application and provides an opportunity for students to link theory and practice in a very specific way. Students want to see the relationship between the theory and practice, and this is another means to have that discussion and point out the relationships that exist.

### **Case Studies**

**Case study 1** is a far too common attitude that designers face from the uninitiated to the world of professional ISD.

**Case study 2** is a situation that almost every designer faces at some point in their career. The need to be able to explain ISD models and why ISD is a science are very common talking points that a designer should have at the ready for addressing these legitimate questions.

**Case study 3** allows students to be creative and think about their approach to the field of ISD. This is a very empowering case study for new students to experiment with and enjoy.

### **Optional Learner Activities**

There are lots of ways to discuss ADDIE and the other ISD models. Here are a few:

- Have each student design their own ISD model and explain each element they have included.
- In a group, have students discuss the relationship between a model and the way someone actually designs courses.
- Ask students to comment on whether theoretical models in ISD are really necessary for the day-to-day work of an instructional designer.

### **Key Concepts**

- ISD models are the scientific foundation for instructional design
- The ADDIE model of ISD
- SAM and other models practiced in ISD
- The three truths of ISD models
- ISD models are not a road map for course design processes

### **Chapter Objectives**

At the end of this chapter, the learner should be able to:

- Define the structure and uses for an instructional design model.
- List the five elements of the ADDIE model of ISD.
- Compare and contrast ADDIE with SAM and at least two other ISD models.
- List the three truths concerning ISD models.
- Explain why ISD models are not meant to be a road map for instructional design projects.

### CHAPTER 5 Analysis

#### Instructor's Overview

In this chapter, students begin to explore analysis, one of the five most often used elements in ISD. Students explore the 5 Ws of analysis as well as the five most common analysis types used in instructional design. The more complex concepts like worst-case scenario analysis and the application of half-life in ISD are also discussed.

Since there are so many variations on analysis in the field of instructional design, this is an opportunity for the instructor to find areas of analysis that best fit your student population. Some may be more interested in root-cause analysis while other may find interest in population and task analysis. Depending on the time allocated for this chapter, you may find some discussion of each of these analytic tools to be useful.

One unpleasant truth in designing instruction is that there is often little or no budget for analysis work. The NOP analysis construct provides an efficient way for designers to determine the basics that they need to get started on a design without allocating excessive time or resources.

This chapter is only an overview of the analysis process in ISD, which opens many opportunities for additional assignments as discussions or projects.

#### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

### **Reflection Questions**

**First sidebar:** NOP analysis is a quick and focused method of analysis that covers most of the basics a designer needs to know when starting the instructional design process for a course or larger project. This is an opportunity for students to explore NOP within the context of their experience and perceptions of what they will need as it relates to analysis as a designer.

**Second sidebar:** Population analysis is a skill that most designers evolve in their careers and it takes some effort to gather and analyze the data that is collected. There is often a sense in novice designers that populations are obvious and that this is an area of analysis that can be either eliminated or done quickly. Students can think about this and share their thoughts either in a group or as a post.

### **Discussion Questions**

### DQ 1. As an instructional designer, what are the two most important areas of analysis when designing a course?

This question starts the discussion of what an instructional designer really needs from the analysis process. Every student may have a different take on this question, which provides the perfect opening for you to discuss the fact that each design project and course may be different and demand a different type of analysis. This then leads to the inevitable conclusion that several types of analysis are almost always needed in every design process.

### DQ 2. In your analysis of a population you discover that many learners are unable to read at the required level of proficiency in the language used in the course. They are, however, able to read proficiently in another language. How does this affect the course design? What options might you suggest to address the problem?

With this discussion we are asking students to consider specific analytic findings and their impact on course designs. A common issue that arises in analysis is the inequality of specific prerequisites across diverse populations. This discussion can be expanded to include any areas of population analysis that might require creative design approaches.

### DQ 3. Do you think a NOP analysis provides sufficient information to design a course in most situations?

Students are not going to have much if any familiarity with the NOP process, so this discussion allows them to investigate how NOP works and their view on its usefulness in the analysis process.

# DQ 4. KPIs, or key performance indicators, are being used by an organization for the expected outcomes for a sales course. As you gather more data, you determine that the KPIs are not directly applicable to the content of the course. How do you proceed with analysis and discussing this with the organization sponsoring the course?

In the process of working on courses and with clients there are often instances where specific information or data is considered important to them, but in fact has little value in the design process because it is dated or inherently incorrect in the context of the design.

## DQ 5. In your analysis of a large population for a safety course you find that there are more than five languages being used on jobsites by different work groups. How do you address this challenge?

This is a very common analysis issue that an instructional designer has to address, and it takes time to work through the options and what is best given the population and other variables, which may include budget. This question often generates a very detailed discussion or the opportunity for a student to offer a reflective post on their approach.

### **Case Studies**

**Case study 1** concerns a very real issue that instructional designers face in analysis not all problems have a course or project-based solution. It asks students to think through ways to approach this common issue in ISD.

**Case study 2** is a common challenge that instructional designer face with clients that are trying to save money by not training or by using already available, less-than-adequate options for training.

**Case study 3** prompts students to become analysis detectives to try and determine an issue that is not necessarily an instructional design problem. Since this is a common aspect of instructional design, it is a good opportunity to discuss this process with students.

**Case study 4** represents yet another common instructional design problem in analyzing and validating data offered by a client. Discuss with students how to determine accuracy and legitimacy of data when mixed with anecdotal information.

### **Five-Question Quiz (Based on Objectives)**

You can add or subtract questions based on your needs.

- 1. Define the process of analysis.
- 2. Describe the NOP analysis process.
- 3. List at least five types of analysis used in instructional design.
- 4. Define *half-life* as it is used in ISD.
- 5. Describe analysis paralysis.

### **Optional Learner Activities**

There are several ways to expand the concepts presented in this chapter:

- Have students form groups and discuss the importance of the analysis process in ISD.
- Provide students with a typical instructional design analysis data set—perhaps demographics data or a task analysis report—and have them work through the process of pulling out the data that is important to them as designers.
- Have students perform a NOP analysis on a specific content and population to get a feel for how the process works.

### **Key Concepts**

- Analysis as the first step in instructional design
- The who, what, where, when, and why of analysis
- NOP analysis as a first step in the analysis process

- Five different types of analysis commonly used in ISD
- Root-cause analysis
- Population analysis
- Task analysis
- Worst-case-scenario analysis
- Instructional strategies for how leaners will be taught
- Half-life in ISD
- Unintended results analysis
- Analysis paralysis

### **Chapter Objectives**

At the end of this chapter, the learner should be able to:

- Define the process of analysis.
- List and define the reason for the five Ws of analysis.
- Describe the NOP analysis process.
- List at least five types of analysis used in instructional design.
- Define root cause analysis in ISD.
- Define *population analysis* in ISD.
- Explain the process of task analysis.
- Explain the reasons for worst-case-scenario analysis.
- Define *instructional strategies*.
- Define *half-life* as it is used in ISD.
- Define *unintended consequences*.
- Describe *analysis paralysis*.

### CHAPTER 6 Design

#### Instructor's Overview

Design is the ISD element where most of the real work of an instructional designer takes place. From analysis to writing evaluation tasks, design encompasses every aspect of ISD.

In this chapter the students will be introduced to the two main deliverables of almost any design project: the design plan and the lesson plan.

The design plan is the planning guide for a project and contains a number of elements that together provide a complete package of information and data for use in the design process.

The lesson plan, as presented in this text, is based on Gagne's nine events of instruction and provides a framework for how to guide learners to mastery using a sequenced and detailed plan for learning.

This chapter provides extra value for teaching students the basics of course design using ISD through discussion and practice that includes writing design plans and lesson plans.

#### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

### **Reflection Questions**

**First sidebar:** New students just starting to learn ISD are often overwhelmed by the amount of work that is necessary to design courses. This reflection prompts students to think about what an instructional designer needs to accomplish beyond just the visible aspects of a course like materials and a teacher's guide. Many novice designs think the design element is all there is to ISD.

**Second sidebar:** This discussion is focused on the necessity for a designer to always use the nine events or an equally sophisticated format for lesson plan design. This is a great place to discuss the fact that some courses don't require this level of detail and it is up to the designer to decide which format works best for each individual course approach.

### **Discussion Questions**

### DQ 1. Why is the design element considered the most important aspect of instructional design?

This first question helps highlight the fact that instructional designers spend most of their time performing design element work. Novice designers might not have the experience to realize the scope of work that a design performs and might not initially think this element is the most important.

### DQ 2. When looking at the elements of a design plan, which do you think are the most important? Which would you consider to be optional?

When students are first exposed to the detail and depth of the process of designing instruction, they are often overwhelmed by the number of steps necessary to perform this work. This discussion allows students to explore the relative value of each element of a design plan and determine what, if anything, is not necessary in the practice of ISD. These discussions generally lead to an acceptance that every element has value.

### DQ 3. What additional elements would you add to a design plan for your work as an instructional designer?

This question allows students to think a little bit beyond the required elements and determine if each individual project might have demands beyond the normal requirements.

### DQ 4. Some designers find the structure of a lesson plan using the nine events of instruction too rigid for most course designs. What are your thoughts on the complexity of the approach?

Very few students will have seen the nine events before reading this and the complexity of designing a lesson plan based on them can be overwhelming. The most important aspect of including the nine events in this chapter is to illustrate the point that implementation of a course has to be incredibly well designed to have any hope of leading learners to mastery. Even after learning this approach, most students will use other formats for presenting implementation plans; however, they will have learned that creating a learning sequence is based in both science and good practice.

## DQ 5. In your opinion, is there any type of course or implementation option where you would not provide a lesson plan for a teacher or facilitator to use while implementing a course?

This is an opportunity for students to express any ideas that do not include the complexity of the nine events lesson plan format. What is important in this discussion is that students provide the necessary detail and sequencing to ensure learning mastery regardless of the specific format used for implementation.

### **Case Studies**

**Case study 1** is a typical discussion that instructional designer will have with clients. The choice of implementation methods needs to focus on the population and availability of viable online options like an LMS or other technologies. **Case study 2** is a fairly common point of tension within grant projects. The grant has certain requirements that must be met and organizational past practices don't always fit well into the new required format.

**Case study 3** represents the scenario that is common with instructional designers who offer pro bono services to community groups and other nonprofits. There may be a tension to not go into the same level of detail because it is a volunteer effort.

### **Five-Question Quiz (Based on Objectives)**

You can add or subtract questions based on your needs.

- 1. Describe the process of design in ISD.
- 2. List the key elements of a design plan.
- 3. Write terminal and enabling objectives for a design plan.
- 4. List each element in the nine events of instruction.
- 5. List best practices for lesson plans.

### **Optional Learner Activities**

There are two incredibly important learner activities for this chapter. They are both important to assure mastery in the content of the course, but they also provide valuable portfolio elements for students to display their work and expertise in ISD:

- Have students prepare a complete design plan with all elements included.
- Have student prepare a lesson plan using the nine events or a similar approach to implementation.

### **Key Concepts**

- Design is the controlling element of ISD
- Design plan elements and format in ISD projects
- Course mission statement or rationale as ISD elements
- Defining target populations
- A course description details the tangible elements of a course
- Objectives are a required element in course design

- Evaluation strategy as a process to define mastery
- Participant prerequisites and minimum learner requirements
- Facilitator prerequisites and minimum required teacher skill set
- Deliverables in a design project
- Cognitive loading is used in course design
- The nine events of instruction
- Lesson plans best practices for course design
- Alternative lesson plan sequencing approaches

### **Chapter Objectives**

At the end of this chapter, the learner should be able to:

- Describe the process of design in ISD.
- List the key elements of a design plan.
- Write a design plan rationale.
- Write a design plan population profile.
- Write a course description for a design plan.
- Write terminal and enabling objectives for a design plan.
- Write an evaluation plan for a course.
- Write participant prerequisites for a course.
- Write facilitator prerequisites for a course.
- Prepare a list of deliverables for a design plan.
- Define cognitive loading in the context of course design.
- List each element in the nine events of instruction.
- List best practices for lesson plans.
- List alternatives for lesson plan sequencing.

# CHAPTER 7 Development

#### Instructor's Overview

The ISD element of development is probably the best kept secret in the field of instructional design. However, in many ways it is the element that has the greatest impact on the final product. In development, designers work to produce the tangible elements of a design like materials such as handouts and visuals. This is also where any programming or app development takes place. Finally, this is where any pilot testing needs to be completed before final decisions are made concerning all course deliverables.

In this chapter, the role of subject matter experts (SMEs) is discussed in detail to address this increasingly common participant in the ISD process.

Points of emphasis in this chapter are SMEs, materials and associated courseware development, quality control of deliverables, and the role of pilot testing and train-the-trainer support elements.

### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

#### **Reflection Questions**

**First sidebar:** This reflection asks students to think about possible roles SMEs might play in work they can envision performing as an instructional designer.

**Second sidebar:** In this reflection students are asked to think about the role that training facilitators play in course design. Is it necessary for each course design to consider some form of facilitator training for the course and content?

#### **Discussion Questions**

### DQ 1. Why do you think the development phase of the instructional design process is not typically recognized as part of ISD by nondesigners?

With this question students need to review all they know about the ISD process and appreciate the fact that instructional design is a much more complex and detailed process than it appears on the surface.

### DQ 2. What percentage of the work involved in instructional design is considered part of the development phase of ISD?

This question requires students to think about ISD from the perspective of a designer and estimate how much work materials development, coding, and other deliverablerelated aspects of instructional design really take when compared to the other ISD elements.

### DQ 3. How many of the five types of SMEs would you typically work with during an instructional design project?

In this discussion, students generally realize that a lot of work done in development is actually accomplished by SMEs or design team members who are performing work often done by SMEs.

### DQ 4. How is pilot testing critical to course design?

Novice instructional designers often think that course designs are completed and ready for implementation without any pilot or field testing. In practice, this may not become clear until a project suffers from problems that would have typically been discovered and addressed in a pilot testing scenario. It is important to point out that catching problems before implementation saves time, resources, and sometimes reputations.

#### DQ 5. Are train-the-trainer courses necessary in most course design scenarios?

This discussion is usually centered on the critical issues of facilitator abilities and whether a course design contains elements that require specific facilitation skills.

#### **Case Studies**

**Case study 1** is a common challenge that instructional designers face when working on multinational or international projects, especially if SMEs speak different languages or have varied ways to approach the same content and implementation questions.

**Case study 2** reflects the fact that sentinel SMEs are known for being more challenging to work with, from the perspective of an instructional designer. This case allows for ways to work with SMEs and find compromises and community within the project.

**Case study 3** is a not uncommon challenge designers often face in working with clients who are trying to save money by either substituting organizational resources or eliminating participation by SMEs.

### Five-Question Quiz (Based on Objectives)

You can add or subtract questions based on your needs.

- 1. Describe the main operational elements of the development function in ISD.
- 2. List the five types of subject matter experts.
- 3. List at least three ways to work productively with subject matter experts.
- 4. Describe the reasons for pilot testing new courses.
- 5. Provide at least three reasons for conducting train-the-trainer sessions for new courses.

### **Optional Learner Activities**

There are several ways to expand discussion and encourage students to think about the development phase of ISD, including:
- Divide students into groups and have them list the types of design responsibilities that exist in in the development phase.
- Use a role-play methodology and have students act as an instructional designer and one of the five types of SMEs.
- Have students describe how they would conduct a pilot test or train-the-trainer element for a typical course design.

# **Key Concepts**

- Development is the product and materials development element of the course design process
- Managing subject matter experts within the course design process
- Five types of subject matter experts:
  - Technical SMEs as content experts
  - Hybrid SMEs
  - Instructional SMEs and facilitating course design
  - Functional SMEs—programmers, artists, and other non-designer resources
  - Sentinel SMEs and the design process from a managerial perspective
- Selecting SMEs as a design function
- Working with SMEs as a skill
- Pilot testing to ensure a design meets expectations
- Train-the-trainer courses to practice before wide-scale implementation
- See one, do one training

# **Chapter Objectives**

- Describe the main operational elements of the development function in ISD.
- Describe the purpose of subject matter experts in the ISD process.
- List the five types of subject matter experts.
- Describe the process of selecting subject matter experts.
- List at least three ways to work productively with subject matter experts.
- Describe the reasons for pilot testing new courses.

- Provide at least three reasons for conducting train-the-trainer sessions for new courses.
- Describe the process used for see one, do one training courses

# CHAPTER 8 Implementation

#### Instructor's Overview

The implementation phase of ISD is often seen from the designer's perspective as something that happens when all their work is completed. While this is occasionally true, there are times when implementation is just as much work and just as important as any other element of ISD.

Implementation is the time when quality control really takes place within the context of the final population of learners and the process of delivering the course. Evaluations of learner experience and mastery must take place during implementation. This is also the time that a higher-order evaluation of the design process takes place, including a performance agreement and the three quality ratings taught in this chapter.

For students, it is important for them to realize that an instructional designer's work isn't over until the evaluation of implementation is completed and any design changes facilitated by the review are employed.

### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

### **Reflection Questions**

**First sidebar:** The performance agreement principle is practically unknown to most designers and it serves a very important role in determining the quality of a course as

it relates to the mastery of objectives. A great discussion or post is having students talk about their experience as a learner when the objectives and evaluation of mastery didn't match, and how they would fix the problem as a designer.

**Second sidebar:** Quality control in the instructional design field is not often discussed and is even less often taught to new designers. This is a perfect opportunity to discuss with students the need for quality control in the ISD process.

### **Discussion Questions**

# DQ 1. What are the most important tasks for a designer to perform during course implementation?

This discussion should include the fact that the actual implementation of the course is just one of many facets of implementation as it relates to the work of an instructional designer.

#### DQ 2. Is it possible to not require or perform any evaluation in implementation?

In this discussion the question of what is appropriate and required for a professional design project is something that students should consider.

### DQ 3. How would you modify the QRO, QRDP, or QRLP to fit your specific design needs?

These three quality ratings are designed to be easily modified to fit specific designer needs. This is a great place to have students play with these ratings and find ways to make them work in specific design scenarios.

#### DQ 4. Do you use any other quality control measures as an instructional designer?

This is an open discussion on the topic of how a student sees quality control within the context of their work as an instructional designer.

### DQ 5. Which do you think is most important to an instructional designer: the evaluation of learners or the evaluation of the instructional design process itself?

While there is no perfect answer to this discussion question, hopefully students will see an equal obligation to determine mastery and assure a quality design product.

### **Case Studies**

**Case study 1** represents a design scenario where an instructor is wanting to make improvements to a course and is asking design specialists to assist. This is a common design scenario and students should be able to list the design steps to determine how to improve the course for the instructor.

**Case study 2** is a common design challenge in that an organization thinks an online course product is not as effective as the traditional in-class courses they have offered in the past. Students need to discuss how they would approach this challenge using quality ratings and Level 1 and 2 evaluations.

**Case study 3** visits the issue of improving an existing course product with some resistance by a SME who is part of the organization's governance body. Discussion often centers around making the case that a better course will serve the organization's goals more effectively.

### **Five-Question Quiz (Based on Objectives)**

You can add or subtract questions based on your needs.

- 1. Define implementation in the instructional design process.
- 2. List the three elements in a standard implementation flowchart.
- 3. List at least two reasons for implementing Level 1 evaluations.
- 4. List at least two reasons for implementing Level 2 evaluations.
- 5. Define the purpose of the three quality ratings used when evaluating the implementation ISD element.

# **Optional Learner Activities**

Here are several engaging, hands-on ways to involve students when studying the implementation element:

- Have students prepare a Level 1 evaluation and discuss their approach within a group or as a post.
- Divide students into groups and have them each take one of the quality ratings and work through an exercise on how they would implement it.

### **Key Concepts**

- Implementation is the most widely recognized element of ISD
- The flowchart approach of three elements: pre-course, delivery, and evaluation
- Level 1 evaluations in implementation
- Level 2 evaluations in implementation
- The performance agreement principle
- Quality rating rubrics for objectives, design plans, and lesson plans

# **Chapter Objectives**

- Define *implementation* in the instructional design process.
- List the three elements in a standard implementation flowchart.
- List at least two reasons for implementing Level 1 evaluations.
- List at least two reasons for implementing Level 2 evaluations.
- Explain the three elements of performance agreement.
- Define the purpose of the three quality ratings used in the evaluation of the implementation ISD element.

# CHAPTER 9 Evaluation

### Instructor's Overview

To many students, evaluation probably means mastery of content and smile sheets it is important for them to appreciate that evaluation in ISD is about every aspect of the design process as well as the evaluation of learners within a course.

Each ADDIE element has a corresponding evaluation protocol, including evaluating the evaluation process. This quality control approach always works to the advantage of the instructional designer.

It is also important for students to appreciate that content in course design is far more complex than they might have originally thought. Objectives have different degrees of difficulty and choosing the correct entry and exit points for content in a design is a higher-order design skill.

### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

### **Reflection Questions**

**First sidebar:** The evaluation of mastery an extended period of time after a course is usually considered a Kirkpatrick Level 3 evaluation. These are not often budgeted, but a designer might think they are necessary given the content and population involved. This question also looks at the evaluation process for the ISD work that a designer performs.

**Second sidebar:** Psychometrics has long been an interesting discussion among instructional designers, with some seeing little value in it and others finding uses they think are useful. What do your students think?

### **Discussion Questions**

### DQ 1. As a designer, what do you think is the single most important element of evaluation?

This discussion question allows students to think through the different forms of evaluation and weigh the value of each. To add depth to the discussion, you can ask students about specific types of courses and discuss how each variable may influence the types of evaluation used.

#### DQ 2. Is it ever reasonable to not measure mastery in learners?

This is an important discussion because evaluation of mastery is one of the basic tenants of ISD. Novice designers may think that learners simply attending a lecture or class without any form of mastery evaluation is acceptable.

# DQ 3. Are there ever times when a learner's apprehension of the mastery of content will affect results?

This discussion should focus on the issue of whether evaluation tasks should have obvious points of mastery or if it is better not to prepare learners for what is expected of them. Most designers would probably argue that learners should always know what is expected of them to reach mastery in a course.

#### DQ 4. What are the most important aspects of evaluating the design process itself?

In this discussion, students should be able to point out that evaluation of the design process must include every aspect of design present in a specific course project. Examples include an evaluation of the analysis (specifically whether it adequately gathered the necessary data) and evaluating the performance of SMEs.

# DQ 5. Does the degree of difficulty evaluation provide data that assists in choosing content for a specific population?

It is important for students to appreciate the fact that almost any content can have a continuum of levels of difficulty ranging from novice to expert; matching the content level with a population's level of skill or knowledge is important when choosing the starting point for the content and determining prerequisites for learners.

### **Case Studies**

Case study 1 is a typical interorganizational discussion about the merits of ISD.

**Case study 2** represents a community college's struggle to upgrade their courses and materials.

**Case study 3** looks at the challenges a community organization faces when maturing into professionally designed courses.

# **Five-Question Quiz (Based on Objectives)**

You can add or subtract questions based on your needs.

- 1. Describe at least two uses for evaluation in ISD.
- 2. Provide at least three reasons for evaluating the design of behavioral objectives.
- 3. Explain why designers should care about the degree of difficulty in objectives.
- 4. List the elements of the performance agreement principle.
- 5. Provide at least two examples of the use of psychometrics in the evaluation process.

### **Optional Learner Activities**

Here are several ideas that you can use when working with students on this chapter:

• Have students work in groups to design Level 1, 2, and 3 evaluations for a specific content and population and then discuss the choices they make.

• Divide students into groups and assign each one of the five ADDIE elements. Have the groups present ideas on how they would evaluate their assigned element consistent with the ideas in this chapter.

### **Key Concepts**

- Evaluation is the ISD phase where all the design and implementation processes and products are evaluated
- Conducting evaluation for the analysis, design, development, implementation, and evaluation phases of ISD
- Conducting evaluation of objectives to ensure quality and for mastery determination
- Degree of difficulty as a necessary aspect of evaluating content rigor
- Performance agreement and the fit between objectives and evaluation tasks

### **Chapter Objectives**

- Describe at least two uses for evaluation in the:
  - analysis stage of ISD
  - design stage of ISD
  - development stage of ISD
  - implementation stage of ISD
  - evaluation of a course or project
- Provide at least three reasons for evaluating the design of behavioral objectives.
- Explain why designers should care about the degree of difficulty in objectives.
- List the elements of the performance agreement principle.
- Provide at least two examples of the use of psychometrics in the evaluation process.

# CHAPTER 10 Behavioral Objectives

#### Instructor's Overview

The ability to write behavioral objectives is often seen as the litmus test for most instructional designers. And, as novice designers soon find out, it is not the actual writing of the objectives that is difficult, it is the necessity to make sure the four elements of audience, behavior, condition, and degree are all present and accurate.

This text uses the four-part approach to writing objectives with further classifications of terminal and enabling objectives. We also discuss the differences between shortand long-form objectives and where they are best used in ISD.

One advanced construct this chapter covers is classification of objectives by the domains of cognitive, tactile, affective, and interpersonal. Each of these further defines the expectations of an objective and allows a student to write objectives that are normally difficult for designers, like music and art appreciation or communications skills.

There are a number of opportunities for students to practice writing objectives and become comfortable with the format and detail necessary to write them.

Also covered in this chapter is the content mastery continuum, which is one way to assist instructional designers with determining a content entry point for learners given a very long continuum of content from novice to expert. A simple example of this is math, which can be very basic or contain formulas that are pages long.

# YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

# **Reflection Questions**

**First sidebar:** One of the finer points of writing objectives is designating them as either terminal or enabling. There are often students who don't see the necessity of doing this. It can make for a lively discussion.

**Second sidebar:** Discussing the content mastery continuum allows students to dig very deep into how instructional designers determine entry and exit points within large content areas. It also requires students to discuss populations and how they influence design and content entry and exit points.

### **Discussion Questions**

# DQ 1. When reviewing the differences between short-form and long-form objectives, when do you see yourself using each as an instructional designer?

These two classifications of objectives take some of the stress out of the expectation that all objectives need to be four art objectives. There are times in the design process when using short-form objectives works just as well, especially when working with nondesign team members like SMEs.

### DQ 2. Since long-form objectives are more complex, do you, as a designer, think writing them is an important part of the ISD process?

This discussion forces students to think about the role of objectives in designing courses and whether short-form objectives are really adequate for most design work.

# DQ 3. Do you believe that differentiating between terminal and enabling objectives when writing long-form objectives is important? Why?

Many instructional designers struggle with writing terminal objectives because they require a summative approach to course designs that are not always easy to write into an objective. Students need to realize that both forms are important, but play different roles in the design process.

# DQ 4. Why is recognizing objective domains an important consideration in writing objectives?

When students dig into objective domains, they usually come away with a new appreciation for the complexity of ISD and why it is a science. Domains are often a turning point in migrating to professional design work.

# DQ 5. Is a performance agreement in instructional design a critical design issue? Why or why not?

Only a few instructional designers have even heard of performance agreement, but it is slowly evolving in the field as an important design consideration. Its true value is in determining whether objectives and evaluation of mastery are consistent within a course design. It also serves as an important evaluative tool when looking at underperforming courses and projects.

### **Case Studies**

**Case study 1** represents a very common instructional design project. The questions illustrate several challenges that students may find in these scenarios.

**Case study 2** represents a situation that is not uncommon in higher education. It's a very realistic scenario, but one that is not always easy to navigate for instructional designers.

**Case study 3** is a situation often faced by instructional designers. There are many times when we are asked to design a course that we don't really see as a course in the formal sense. This requires some discussion to determine the best approaches and how objectives should be written to match the course content and implementation without formal evaluation of mastery.

# **Five-Question Quiz (Based on Objectives)**

You can add or subtract questions based on your needs.

- 1. Describe the role objectives play in the instructional design process.
- 2. Illustrate why objectives need to be both observable and measurable.
- 3. Describe the four elements of long-form objectives.
- 4. List the four objective domains and key features of each.
- 5. Explain the importance of performance agreement.

### **Optional Learner Activities**

This chapter contains some great ways to provide opportunities for students to practice writing objectives, including:

- Have each student write a formal and informal objective.
- Have students work in groups to write terminal and enabling objectives.
- In a group or a post, ask students to write one objective for each of the four objective domains.

# **Key Concepts**

- Behavioral objectives are a foundational element of instructional design
- Behavioral objectives are both observable and measurable
- Short-form objectives
- Long-form objectives
- Four parts of long-form objectives:
  - Audience element
  - Behavior element
  - ° Conditions
  - ° Degree
- Terminal objectives
- Enabling objectives
- Objective domains
- Performance agreement principle
- Content mastery continuum

### **Chapter Objectives**

- Describe the role objectives play in the instructional design process.
- Illustrate why objectives need to be both observable and measurable.
- List the two types of objectives.
- Describe the key features of short-form objectives.
- Describe the four elements of long-form objectives.
- Describe the difference between terminal and enabling objectives.
- List at least two reasons why objectives are different than goals or procedures.
- List the four objective domains with key features of each.
- Explain the importance of performance agreement.
- Describe at least two uses for the content mastery continuum in writing objectives.

# CHAPTER 11 Distance Education

#### Instructor's Overview

Instructional designers are facing one of the most vivid turning points in ISD as more courses are migrating online. What was already becoming a growing field of design accelerated exponentially with the 2020 pandemic and many organizations have forever changed their approach to delivering their courses and content.

While designing for learning at a distance is certainly not new, the sheer volume of course migration is staggering. This chapter looks at the basics of distance education (DE) and creates a place for students to discuss the ways that designing for DE can be different.

Social media, packet learning, MOOCs, and the four generations of distance learning are also discussed in this chapter.

### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

### **Reflection Questions**

**First sidebar:** This reflection targets the migration to online courses in the nonacademic world of nonprofits, corporations, and other training-based organizations. Since the focus has been on K–12 and higher education, many of these other organizations have been lost in the conversation. This makes for a great discussion of how instructional designers can assist these organizations in migrating their content online.

**Second sidebar:** Packet learning is a relatively new field of learning transfer, and students need to be able to discuss how to accomplish the packeting of learning moments within the context of course design.

### **Discussion Questions**

# DQ 1. How does distance learning bring learners to mastery? How does it compare to classroom learning in effectiveness?

The common discussion of negatives in distance learning always includes how to determine mastery. As experienced instructional designers already know, mastery is just as easily determined in DE, it simply takes a different approach. Students should discuss this issue and how DE design is different than traditional design.

# DQ 2. Would you be tempted to incorporate a new smartphone app into a distance learning course just because it is popular with your target population?

Social media and instructional design are now very common partners in course design, but not everyone is at the same level of acceptance. This discussion with students is often very enlightening and they will likely bring up issues like privacy.

# DQ 3. Do you believe there will be a fifth generation of distance learning? If yes, what will it be?

Always a great discussion that allows students to be futurists and give their opinion of where learning is headed.

### DQ 4. As an instructional designer, what value do you see in MOOCs for course design?

Discuss the idea of very large distribution and that fact that most MOOC participants never formally participate or are evaluated for mastery.

### DQ 5. In your opinion, what is the most valuable ADDIE element when designing distance learning courses?

This is a common discussion among instructional designers, and it is sometimes thought that the focus of DE design is probably more on development because it involves many technical aspects of the process.

# DQ 6. Are learning management systems necessary for the average distance learning course design? Why or why not?

This creates great discussion with students because there are so many different ways to design distance education courses. A discussion that includes costs for each option and design team overhead are good places to visit with students.

# DQ 7. Are packet learning events more efficient learning tools than standard, analog design approaches?

Packet learning is a fairly advanced concept in ISD and learning, and its incorporation into this chapter is a wonderful opportunity for students to dig deep into learning theory as it relates directly to online learning. Discussion of social media and its packet approach to communications is often very informative.

# **Case Studies**

**Case study 1** is a typical interorganizational discussion about the merits of ISD.

Case study 2 shows a community college's struggle to upgrade courses and materials.

**Case study 3** looks at the challenges that a community organization faces when maturing into professionally designed courses.

# **Five-Question Quiz (Based on Objectives)**

You can add or subtract questions based on your needs.

- 1. Define *distance learning*.
- 2. Describe the key distinguishing features of each of the four generations of distance learning.

- 3. Define a *MOOC* and its key components.
- 4. Describe at least one challenge for each of the ADDIE elements when designing distance learning.
- 5. Explain the concept of packet learning and provide at least two examples.

### **Optional Learner Activities**

There are several ways to enhance the conversation of the topics in this chapter:

- Have students take one or more of the most popular social media apps, like YouTube or Instagram, and design a course based on its use.
- Divide students into four groups and have each discuss the key elements of one of the four generations of distance learning.
- Have students take a typical learning module and break it up into learning packets to highlight how learning can be divided into small learning moments and distributed more efficiently through social media.

# **Key Concepts**

- Learning at a distance is not new to ISD
- Four generations of distance learning
- Massive open online courses (MOOCs)
- Social media in distance learning
- Learning packets

# **Chapter Objectives**

- Define *distance learning*.
- Describe the key distinguishing features of each of the four generations of distance learning.
- Define a *MOOC* and its key components.
- Describe at least one challenge for each of the ADDIE elements when designing distance learning.
- Explain the concept of packet learning with at least two examples.

# CHAPTER 12 Learning Management System

### Instructor's Overview

With the advent of online learning in higher education in the 1980s, learning management systems started the journey to the design tool we use today. Every instructional designer should have at least a working knowledge of what an LMS can provide and the basic components that designers can use in course and program design.

This chapter is a generic overview of these systems and provides the theoretical background on adaptive user interfaces (AUI) and how they proved the foundation for these systems.

Instructional designers should be aware of the challenges that these systems can create when designing courses and this chapter offers several ways to think about and address these issues.

### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

### **Reflection Questions**

**First sidebar:** One issue inherent in designing any online course is creating a welcoming and supportive online environment. This reflection asks students to think about how to create online communities to aid in useability and mastery.

**Second sidebar:** When the LMS first entered the design scene, many potential users were largely unfamiliar with even the basics of computers and online navigation. In these early years, a lot of design attention was paid to navigation and teaching learners how to use the software before starting an LMS-based course. This reflection asks students to discuss how a population's inherent familiarity with computers and software in general will affect design decisions.

### **Discussion Questions**

# *DQ 1. What are the five most critical advantages of using an LMS for designing online learning?*

Have students discuss why it is a good design decision to use an LMS when designing courses for a large population of learners.

### DQ 2. What are the three most challenging aspects of designing with an LMS?

Designing courses for implementation by LMS will bring about its own design challenges. Have students discuss what design elements they will have to consider when addressing any of these issues.

# DQ 3. In your opinion, what are the most valuable student learning tools available in an LMS?

This discussion will usually lead students to find one aspect of an LMS that they think will enhance the learner experience.

# DQ 4. Are there any student learning tools you would like to see in an LMS that are not now available?

As these software products mature, it is reasonable for designers to provide input on what they think will further add value to LMS-implemented course designs.

#### DQ 5. What are the differences between open-source and commercial LMS systems?

This discussion can be a lot more detailed than it may appear on the surface when more experienced students are included. While the issue of cost will generally mentioned, more experienced students will point out that it takes a lot of time and money to mature most open-sourced LMS products, even though they might be less expensive in the beginning.

### **Case Studies**

**Case study 1** represents a scenario where instructional design is asked to create a course catalog to enhance a fundraising effort. What types of challenges will the designer face given these specific organizational needs?

**Case study 2** presents a very real challenge that thousands of instructional designers are facing right now. This is the perfect case study for a student population that contains in-house higher education designers.

**Case study 3** looks at how to mature an organization's present course offering model and move it to an open source LMS. There are lots of variables that a designer needs to address in this process.

### **Five-Question Quiz (Based on Objectives)**

You can add or subtract questions based on your needs.

- 1. Describe the role that an LMS plays in instructional design and distance learning.
- 2. Define adaptive user interface.
- 3. List a minimum of three LMS student learning tools and their functions.
- 4. List a minimum of three LMS course management elements and their functions.
- 5. Describe at least three design challenges when using an LMS.

### **Optional Learner Activities**

There are several ways to make this chapter come alive for students, including:

- Have students access an LMS and work through the navigation and other learner-side interfaces for ideas on how to best use these in designing courses.
- Have students access the instructor side of an LMS and review the myriad options a designer has to work with when using the system to design and manage a course.

### **Key Concepts**

- A learning management system is a software interface for course design and delivery
- Principle of adaptive user interface
- Student learning tools that can be used effectively in course design
- LMS software and course operational elements for design use
- LMS software and course management elements for design implementation
- Constancy of LMS design challenges

# **Chapter Objectives**

- Describe the role that an LMS plays in instructional design and distance learning.
- Define *adaptive user interface*.
- List a minimum of three LMS student-learning tools and their functions.
- List a minimum of three LMS course operational elements and their functions.
- List a minimum of three LMS course management elements and their functions.
- Describe at least three design challenges when using an LMS.

# CHAPTER 13 Social Media

### Instructor's Overview

The use of social media in courses and within the practice of instructional design is becoming mainstream, yet remains somewhat controversial. From a design perspective, social media is no more or less an ISD tool than any other; however, it does have to be managed carefully to maximize its effectiveness.

Students in this chapter will gain a good background on the history of social media (starting with Andre Gray in the mid-1990s), and then work their way into present day apps and approaches. Look for the notes to designers on considerations when designing with social media for practical ideas from the instructional design perspective.

### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

### **Reflection Questions**

**First sidebar:** The reality of social media is that learners generally either love or hate it. How does a designer navigate this minefield of personal opinions about social media?

**Second sidebar:** As we dig deeper into designing with social media, we'll find populations and organizations that will simply not want to use it within courses. How does a designer decide when it is appropriate to suggest using social media?

### **Discussion Questions**

### DQ 1. Do you believe that social media is a viable course design option?

This discussion can get very lively, with strong opinions on both sides of the question.

# DQ 2. How can you help learners distinguish between personal social media use and course-related social media participation?

One of the issues that designers face is moving from the personal use of social media apps (and their somewhat wild-west behavior) to having learners respect the more traditional rules of the classroom with course-based social media use.

### DQ 3. What do you see as the largest benefit to providing social media course activities?

There are many good design reasons to use social media as a designer, and this discussion often brings to light benefits that some students had not considered.

### DQ 4. What concerns do you have for social media in design projects?

This discussion is often very interesting as students express their fears about formal social media use and how to control it in a course or program's learning environment.

# DQ 5. Are some learning populations more likely than others to benefit from social media use in a course?

You will often hear that younger populations benefit more from social media within courses than older populations.

### DQ 6. Is there any course design scenario in which you would not include social media?

You may get some surprising answers in this discussion, as many organizations limit or ban completely the use of social media by employees, especially in certain security and proprietary work environments.

# DQ 7. How can a designer ensure that no student's personal information is available as part of a social media course design approach?

This discussion may get a little technical or be difficult for some students, depending on their previous use of social media and technology in general.

### **Case Studies**

**Case study 1** is a real-world case study that instructional designers experience every day. What solution should an instructional designer suggest within these scenarios?

**Case study 2** represents a situation where organizations do not want smartphones to be used or even present within their facilities. Is there an argument that an instructional designer can put forward to suggest that making an exception for certain courses and populations is a good idea?

**Case study 3** looks at using social media as a key course design element with a client. How does a designer make the case that a course will be better if social media is part of the implementation approach?

### **Five-Question Quiz (Based on Objectives)**

You can add or subtract questions based on your needs.

- 1. Describe social media use in instructional design.
- 2. Define the concept of social media as it applies to instructional design.
- 3. List at least three ways to include social media in course design.
- 4. Describe at least three ways social media must be managed within a course.
- 5. List at least three areas of concern for learners when using social media within a course.

### **Optional Learner Activities**

Students can often find value in these activities:

- Have students pick a social media app and design learning activities that can be used within a course based on the app.
- Divide students into groups, and have each group use a different social media app (such as Twitter, Facebook, or Instagram) and discuss the pluses and minuses of using it in course design.

### **Key Concepts**

- Social media as a common element of instructional design
- Distinguishing between instructional and personal social media usage
- Integrating social media into course designs
- Designing social media into courses
- Designer considerations relating to populations during implementation

# **Chapter Objectives**

- Describe social media use in instructional design.
- Define the concept of social media as it applies to instructional design.
- List at least three ways to include social media in course design.
- Describe at least three ways social media must be managed within a course.
- List at least three areas of concern for learners when using social media within courses.

# CHAPTER 14 ISD Workflow

#### Instructor's Overview

One area of instructional design that is seldom covered in formal courses is the workflow of moving a course and program through the design process. This chapter presents one way of thinking about workflow in ISD.

There are any number of approaches to this process, and this is not meant to be the only one that students will see in their careers. Project management software abounds in the field, so this is meant to be a foundational view of the process.

### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

#### **Reflection Questions**

**First sidebar:** Since workflow and project management are not at all confined to the practice of ISD, students may have some previous experience with this process. This reflection will engage students to consider what they would like to see in a workflow in their specific design environment.

**Second sidebar:** The workflow element most likely to be ignored is *improving*. This is often based on time and budget constraints and in some ways is to be expected. Designers are always busy, and they are anxious to move on to the next project. This sidebar asks students to reflect on their views on this process.

### **Discussion Questions**

### DQ 1. Why are workflow plans required for ISD design projects?

This discussion can be a real eye opener for students because the complexity of the typical workflow in ISD is more sophisticated than appears on the surface.

#### DQ 2. Is there ever a time when a formal workflow process is not necessary?

This is a great question because it gets to the heart of workflow and why it is necessary, even if informally followed. It is interesting to see if any students think it isn't necessary at all.

#### DQ 3. Does it save time or add time to have a workflow plan for a project?

One of the most frequent conversations designers have with clients and the uninitiated is about why all the detail is necessary and why the process is budgeted the way it is. As designers point out, the detail saves time and money because it is efficient and assures quality. Workflow is always part of this discussion, and students should explore this aspect of being a designer.

### DQ 4. Are there any additional workflow elements you would add?

Always a great discussion with students because they will often come up with elements that others might not have considered.

### DQ 5. Are any of the workflow elements unnecessary for your work?

This discussion will often result in a list of elements that students don't think are necessary. Then, the more the list is discussed, the more students start to see why those elements might, in fact, be necessary.

#### DQ 6. Why is it important to celebrate the conclusion of every design project?

As students, they may think it is a requirement that designers and clients celebrate each course and project as a way of bringing closure to their work.

### **Case Studies**

**Case study 1** represents a common workflow challenge that designers face. Students will have fun working through this case study because it is so close to real life for them.

**Case study 2** brings together the philosophy of celebration employed by a cancer support group with patients and ISD workflow in a unique way. What do students think of celebrating each design milestone?

**Case study 3** represents the challenge that all designers face at some point in their careers. Working through the migration from informal to formal workflow is a real learning experience for students as they discuss the questions raised here.

# Four-Question Quiz (Based on Objectives)

You can add or subtract questions based on your needs.

- 1. Define the concept of workflow in the context of instructional design.
- 2. Describe why workflow is different than a theoretical ISD model.
- 3. List the 10 elements of workflow for an ISD project.
- 4. List a key feature of each of the 10 workflow elements.

### **Optional Learner Activities**

This chapter has many opportunities for group projects and posting activities, including:

- Have students look at a typical design project and work through the workflow elements to see if they would be useful to them or if there are too many or are too complicated.
- Have students divide into two groups and ask one group to present the reasons workflow is important; have the other group present why workflow isn't necessary.

### **Key Concepts**

- Workflow in ISD is critical to design process efficiency
- Workflow elements: imagining, defining, planning, assigning, producing, reporting, implementing, evaluating, improving, and closing

### **Chapter Objectives**

- Define the concept of workflow in the context of instructional design.
- Describe why workflow is different than a theoretical ISD model.
- List the 10 elements of workflow for an ISD project.
- List a key feature of each of the 10 workflow elements.

# CHAPTER 15 Criticality and Content Mastery Continuum

### Instructor's Overview

This chapter covers two higher-end concepts and constructs in the field of ISD. The content mastery continuum (CMC) is one way of looking at how to work with behavioral entry and exit points for content. Criticality is a higher-order methodology for students to learn how to systematically and objectively choose which content to include in a course or program.

Criticality is a very intricate methodology; if you are going to work through the process, you will need to allow enough time for the concept and math involved to sink in. Practice will be necessary for students working through this chapter.

### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

### **Reflection Questions**

**First sidebar:** At an operational level, making decisions about who participates in criticality determination is a very important question. Students can work through this discussion as they think about all the related issues in this process.

**Second sidebar:** The content mastery continuum will likely be a new concept for students using this text, so having a chance to reflect on what the CMC provides designers is a great conversation.

### **Discussion Questions**

# DQ 1. When analysis shows a population with a range of mastery levels and you are trying to determine the entry point for the content, what do you do as a designer to solve this problem?

This is one of the more common decisions that designers are faced with as they get started on a new course. This discussion really allows students to dig into their role as a designer and how to make crucial entry and exit point decisions on content.

# DQ 2. Using the mastery tipping point, how would you determine mastery points for a course design?

Discussion of the mastery tipping point is high-level topic as it requires students to think about when a course design needs to move from cognitive to more applied objectives. Many great ideas and approaches will be offered by students as they move through this topic.

# DQ 3. It is common for clients and designers to have different views on course mastery requirements. How would you use the tools in this chapter to address this issue?

It is not unusual for designers and clients to have differing points of view on mastery and what is really necessary for a course. A discussion of the content mastery continuum and criticality can at least pave the way for students to think about how to address the issue.

### DQ 4. After performing a criticality study, you find that most of the content in a 10hour course is unnecessary and the rest could easily be implemented in three hours or less. How do you present this to the client?

Some variation of this question often makes its way into the decisions designers make as they work through the realities of what the data tells them. This is a nice place to discuss the more subtle areas of design.

# DQ 5. When classifying objectives, do you think it is possible to have an objective rated as "critical" and yet never considered for inclusion in a course?

This is the "red button in the control room" question and, while rare, it forces students to make decisions concerning what content stays and goes. Should they include indepth training on a procedure they will probably never use?

# **Case Studies**

**Case study 1** presents a common use of criticality to objectively determine content choices. Students will have to think through how they want to approach the process.

**Case study 2** is a more drastic look at content, and while not common it is also not unusual for a designer to face this higher level of course mitigation.

**Case study 3** looks at the role of CMC in negotiation content when two very diverse bodies of opinion exist within a client group. This is a great case study for addressing some of the finer points of this process.

# Five-Question Quiz (Based on Objectives)

You can add or subtract questions based on your needs.

- 1. Demonstrate the use of criticality to select appropriate content.
- 2. List the four levels of criticality in ISD.
- 3. List the six frequency of application levels in criticality.
- 4. Define content mastery continuum.
- 5. Define mastery tipping point.

### **Optional Learner Activities**

Here are some ideas for group activities for this chapter:

- Present groups of students with different content and have them determine which is necessary for a course design using criticality.
- Provide students with some basic content and have them determine entry points for different populations using the CMC.

### **Key Concepts**

- Criticality approach to content selection
- Four levels of criticality
  - Critical content
  - Required content
  - Prerequisite content
  - Unnecessary content
- The content mastery continuum and learner mastery from novice to expert levels
- The mastery tipping point and the point where mastery of a specific objective is met

# **Chapter Objectives**

- Use criticality to select appropriate content.
- List the four levels of criticality in ISD.
- List the six frequency of application levels in criticality.
- Define content mastery continuum.
- Define *mastery tipping point*.

# CHAPTER 16 Competency-Based Instructional Design

### Instructor's Overview

Not everyone needs the same amount of course work to reach a point of mastery for certification, and some corners of the ISD world are trying to solve this problem. Adult learners may have incredible amounts of informal or on-the-job training that meets or exceeds the formal requirements.

This chapter looks at this question and how to address it within specific populations.

### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

### **Reflection Questions**

**First sidebar:** This is a great discussion that asks students to make sense of a field like ISD, which has roots from ancient times to modern practices that use all of today's technology and software options.

**Second sidebar:** The notion of a learner taking a course without having participated in any related instruction is one that is often discussed by clients and designers. It is always interesting to hear what students think about this idea.
#### **Discussion Questions**

# DQ 1. You are asked by the owner of a large electrical contractor to find out if several of their non-licensed electricians can test out of the examination for being licensed. Where do you start?

This is a great discussion to have with students because it is representative of the kinds of real-world issues arise in the practice of ISD.

# DQ 2. Do you think it is fair that learners with more experience can essentially test through some or all of a credential by just being evaluated?

The question of fairness is often raised by learning population members during focus groups for this concept. If some have to take the course before evaluation, why do others get to skip the course? Great discussion with students.

#### DQ 3. Is there any downside to using CBE?

The one discussion that often takes place with this question is, "What about the lost revenue that the courses would generate for the organization?" Students should be able to discuss this with clients when it is brought up as an issue.

# DQ 4. What is your answer to a client who thinks the level of detail required for competency-based learning is unnecessary?

Clients often won't appreciate the level of detail associated with any aspect of ISD. Students should have an answer to this type of question, and this discussion will help them think about how to approach this in their work.

#### **Case Studies**

**Case study 1** is a detailed look at a real-world project and how to best address the process.

**Case study 2** addresses the challenges that designers face when trying to balance full programs with courses and then adding a "just evaluation for certification" element. This is a great way to work through any issues that may come up.

**Case study 3** presents real-world situation and offers students a chance to experience making a presentation to a board or similar organizational governing body. Lots for students to think about in this case study.

#### **Five-Question Quiz (Based on Objectives)**

You can add or subtract questions based on your needs.

- 1. Define *competency-based education* in the context of ISD.
- 2. Discuss the history of CBE and why it has become popular.
- 3. List the steps in designing courses for CBE.
- 4. Explain the process of designing competency-based evaluation programs.
- 5. Explain the financial implications of replacing courses with competency-based evaluation programs.

### **Optional Learner Activities**

Several ideas for group work in this chapter include:

- Present students with a specific certification for a skill set (like EMT or firefighter) and have them work through the issues associated with preparing an evaluation of mastery for certification that does not include course requirements. Questions to ask include "Will this process still meet regulatory requirements?" and "How will the already certified feel about others being able to 'skip' the course requirements?"
- Divide students into groups. Have one group take the side of promoting competency exams without course requirements; have the other make arguments against allowing this to take place.

# **Key Concepts**

- Competency-based education (CBE)
- Competency-based design
- Competency-based evaluation
- Designing CBE programs
- Financial aspects of implementing CBE

### **Chapter Objectives**

At the end of this chapter, the learner should be able to:

- Define *competency-based education* in the context of ISD.
- Discuss the history of CBE and why it has become popular.
- List the steps in designing courses for CBE.
- Explain the process of designing competency-based evaluation programs.
- Explain the financial implications of replacing courses with competency-based evaluation programs.

# CHAPTER 17 Migrating Classroom to Digital

#### Instructor's Overview

The process of migrating traditional classroom courses to an online environment has taken on a great deal more importance lately, and this chapter outlines some of the design elements students will need to consider as they work in this area of ISD.

While the ISD process involved in the migration is no more complex than other instructional design course issues, there are unique areas that students will need to consider, including different evaluation requirements and how to work with teachers on the migration.

One design challenge that often appears is how to convert the informality of some course evaluations to an online evaluative structure that requires a much more formal approach to fit in the format of most learning management systems.

#### YouTube Channel Support Videos

Instructional Design From the Ground Up: youtube.com/channel/UCU3GyMhlGc\_vigqUg4MqVLw/videos

# **Reflection Questions**

**First sidebar:** A common concern among teachers as they migrate courses online is that it changes the relationship they have with their learners. It is interesting to hear from students how they feel about this and if there is a way for instructional designers to ease their concerns.

**Second sidebar:** When migrating courses from classroom to online, a common question is whether the new course is as educationally sound as the original classroom version. Students need to be able to think this through and decide for themselves if migrating a course negatively affects its quality.

#### **Discussion Questions**

#### DQ 1. Does the process of migrating classroom courses to online implementation require any instructional design approaches that are different than standard classroom course design?

This is a key question for the design process of migrating courses online, and students need to discuss what they see as different about this process.

#### DQ 2. Why do you think many instructors are reluctant to move courses online?

Instructors often have some hesitation and doubt about this process, especially if it is being done when it wasn't their idea. Students will want to discuss this and have some ideas for working with instructors who feel trapped by the process.

# DQ 3. Do you think that evaluation of mastery is easier or more difficult in a virtual learning environment?

Almost every designer will think that evaluation of online learning is different than typical classroom approaches. Students will need to discuss this and determine how they feel about the added design work needed in most cases.

# DQ 4. How can you design online courses that minimize or eliminate the prospect of learners cheating on quizzes, tests, and other assignments?

This is an important discussion with students, especially if they will be working on academic programs or courses that lead to examinations for certification.

### DQ 5. Blogs and vlogs are very popular, and many instructors want to include them in their courses. What is the best way to design these features from an instructional design perspective?

Social media has opened the door for adding any number of new design choices, and online journaling is one of the most popular ideas. Discussions with students should include privacy and other related concerns.

# DQ 6. How can you design group work and activities for new online courses that are similar and as valuable as when they were used in the original classroom course?

Online group work can be a tricky design element to implement. Often, groups have problems due to lagging participation by one or more members or they are so geographically dispersed that timing synchronous group work is almost impossible.

# **Case Studies**

**Case study 1** is a representation of a real scenario that designers face in this process. It is always a good idea to talk this through with students to see what they think is the best way to proceed, given the variables like attitude and resistance from faculty.

**Case study 2** is an example of a designer facing unrealistic expectations for the amount of time it will take to complete a project. Discuss with students what compromises they think will be necessary in this scenario.

**Case study 3** looks at the challenges inherent in migrating group work assignments online. Students will be able to address some of the issues that occur when migrating these types of courses online.

# **Five-Question Quiz (Based on Objectives)**

You can add or subtract questions based on your needs.

- 1. Define the process for migrating classroom courses to online courses.
- 2. List at least three advantages for migrating courses.
- 3. List at least five of the steps to migrate a course.

- 4. Discuss at least two challenges to migrating a course.
- 5. Discuss at least two challenges in providing evaluation with migrated courses.

### **Optional Learner Activities**

Here are some ideas for group work with this chapter's content:

- Have students work through a simple course that is being migrated to online and discuss the various aspects of the process that will be different than standard classroom course design.
- Divide students into two groups; one that will act as instructional designers and one that will portray instructors that are resistant to moving their courses online. Have them each make their case about the process.

# **Key Concepts**

- Migrating courses from classroom to online
- Advantages to moving courses online
- Process for migrating courses online
- Instructional design solution to challenges
- Challenge of evaluating courses after migration

# **Chapter Objectives**

At the end of this chapter, the learner should be able to:

- Define the process for migrating classroom courses to online courses.
- List at least three advantages for migrating courses.
- List at least five of the steps to migrate a course.
- Discuss at least two challenges to migrating a course.
- Discuss at least two challenges in providing evaluation with migrated courses.