INSTRUCTOR'S GUIDE

KARL M. KAPP

ACTION-FIRST LEARNING

Instructional Design Techniques to Engage and Inspire

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1

Actions Speak Louder Than Words

Give students a blank sheet of paper or a white board, if teaching online, and instruct them to draw what they think a framework or model would look like for an action-first approach to learning. Tell them they need to include elements representing reflection, knowledge application, and a trigger event. Tell them they can add anything else they would like to the model or framework. This activity can be conducted in groups of two or three, which will allow students to meet together to discuss what their framework or model will look like. After 15 or 20 minutes, ask them to share their images and rationales with the larger class. *(Find the explanation at the end of the chapter.)*

Instructor's Overview

In this chapter, students will explore the concept of action-first learning. Understanding the definition and elements of action-first learning will help students apply the concept to their own work in the design, development, and facilitation of instruction either online or face-to-face. This chapter explains the theoretical underpinnings of the topic and is important to establish that action-first learning comes from a long and established history of action-oriented training designs.

The more students can appreciate the fact that action-first learning is based on peer-reviewed research and comes from a vibrant theoretical and practical history, the easier it is for them to dig into the more practitioner-based aspects of applying action-first learning (which is covered in subsequent chapters).

The action-first model presented in this chapter is original and appears for the first time in this work. The model is an important framework to help students appreciate the impact that action-first learning can have on their approach to designing instruction.

Each chapter in this book opens with an exercise asking the reader to take some kind of action. Encourage your students to partake in this exercise. You may even want to

consider having the class do the activity as a group. This will provide a common experience from which the students and you can draw insights and ground observations.

YouTube Channel Support

There are videos in the Action-First playlist on my YouTube channel that will help with each chapter. Visit youtube.com/@ProfKapp01.

Reflection Questions

1. Ask learners to reflect on their experiences in both passive and active learning situations. Consider conducting a think-pair-share exercise in which the students first reflect individually, then pair up with a fellow student to compare their reflections and choose the best one, and then share their findings with the rest of the class. If you have time, you can ask each pair to reflect; if not, choose a few pairs at random to share.

2. Ask students to share their most interactive learning experiences. After they share, ask the students to name the elements of the experiences that best supported their learning. If they are having trouble making the connection, point out that interactive elements often engage multiple senses, encourage active participation, and provide immediate feedback. These common elements can help learners stay focused, process information more deeply, and connect new knowledge to existing knowledge.

Discussion Questions

1. **Why is the term action-first learning valuable?**
   The term action-first learning highlights the importance of engaging learners actively from the beginning of the instructional process. It provides a flexible framework for instructional design, emphasizing meaningful actions that draw learners into the material and sustain their attention. By distinguishing itself from other terms, it avoids rigid academic definitions and focuses on practical application.

2. **Why is action-first learning so effective?**
   Action-first learning is effective because it immerses learners in activities that require participation, critical thinking, and problem-solving from the start. This approach enhances retention, motivation, and engagement by encouraging learners to think about connecting their actions to their learning goals. Additionally, it reduces passive consumption of information, fostering deeper and more meaningful learning experiences.

3. **What theoretical foundations and research support action-first learning?**
   Action-first learning is rooted in Jean Piaget's constructivist theories, emphasizing that knowledge is actively constructed through experience. John Dewey's advocacy for experiential and problem-based learning also provides a strong foundation, and so does work by professor and management consultant Reginald (Reg) William Revans. Modern research, including meta-analyses in STEM and humanities education, demonstrates that active learning improves outcomes, reduces failure rates, and enhances long-term retention compared to traditional passive methods.

4. **What role does reflection play in ensuring the success of an action-first learning experience?**
   Reflection consolidates learning by encouraging participants to process their actions, analyze outcomes, and connect them to broader concepts. Without reflection, learners may engage in activities without fully internalizing the lessons.

5. **In what ways can sensory activation enhance the learning process within action-first frameworks?**
   Activating multiple senses enriches the learning experience by creating stronger memory cues and deeper engagement. For example, incorporating visuals, sounds, and tactile elements can mimic real-world environments and aid recall.

6. **How does action-first learning align with the needs of organizations and learners?**
   Workplaces and organizations demand practical skills, adaptability, and problem-solving abilities—all of which action-first learning fosters. It also aligns with the emphasis on experiential learning and rapid application in professional settings.

7. **What are the potential benefits and drawbacks of using immediate actions to capture learner attention?**
   Immediate actions can effectively engage learners and set a dynamic tone for the session. However, if poorly designed, they may confuse or overwhelm learners, detracting from the learning experience.

8. **How can instructional designers ensure that the actions in their learning designs are both meaningful and relevant?**
   Designers must analyze learner needs and align activities with clear objectives and real-world applications. Iterative testing and feedback from learners can also help to focus on the relevance and impact of the actions taken by the learners.

9. **How can organizations measure the effectiveness of action-first learning in achieving desired outcomes?**
   Organizations can use metrics like performance improvement, learner feedback, and application of skills on the job. Longitudinal studies tracking behavior change and

organizational impact can provide deeper insights into effectiveness as well. This can be especially effective in an academic setting.

10. **How does action-first learning allow the L&D community to make engaging, meaningful, and active learning part of a broader design philosophy?**
    Action-first learning provides a versatile framework for integrating active, learner-centered approaches into instructional design across various contexts. Instead of being a rigid methodology, it serves as a philosophical lens through which designers can prioritize engagement, critical thinking, and meaningful interaction in their learning experiences. This flexibility can encourage the L&D community to create dynamic and effective learning designs that resonate with both organizational goals and learner needs, fostering deeper connections and practical application.

Five-Question Quiz With Answers

1. **What is the main benefit of introducing action-first learning at the start of a learning experience?**
   A. It saves time for facilitators.
   B. It engages learners and gets their attention early.
   C. It reduces the need for feedback.
   D. It simplifies the content.

   Answer: B. It engages learners and gets their attention early.

2. **Why is action-first learning described as a flexible framework rather than a strict methodology?**
   A. It includes predefined steps for all learning contexts.
   B. It avoids rigid definitions and emphasizes practical application.
   C. It eliminates the need for theoretical foundations.
   D. It prioritizes academic accuracy over learner engagement.

   Answer: B. It avoids rigid definitions and emphasizes practical application.

3. **What is a critical component of action-first learning that ensures long-term retention?**
   A. Memorizing key concepts
   B. Passive absorption of content
   C. Immediate actions followed by reflection
   D. Extensive prework before learning begins

   Answer: C. Immediate actions followed by reflection

4. **How does activating multiple senses enhance learning in action-first frameworks?**
   A. It simplifies the learning design process.
   B. It creates stronger memory cues and aids recall.
   C. It reduces the need for feedback during instruction.
   D. It replaces critical thinking activities.

   Answer: B. It creates stronger memory cues and aids recall.

5. **How does action-first learning address the challenge of learner disengagement?**
   A. By requiring extensive reading before the session begins
   B. By immediately involving learners in meaningful, hands-on actions
   C. By replacing all active tasks with detailed lectures
   D. By reducing the complexity of the learning material

   Answer: B. By immediately involving learners in meaningful, hands-on actions

Suggested Learner Activities

- Divide students into small groups and ask them to design a short learning activity (five to 10 minutes) that incorporates the core elements of action-first learning: immediate action, reflection, and critical thinking. Each group of students should choose a relevant topic, or you can assign one. Ask the students to outline how the learner will be actively engaged from the start. Have the groups present their scenarios and discuss how their designs align with action-first learning principles.

- Provide students with a prompt based on an experience they've had with action-based or interactive learning. For example: "Describe a time when you learned something new through doing rather than listening. How did reflection solidify your learning?" Ask learners to write down their experience and share it with the class. Or, you can make this an essay assignment for students to complete as homework.

- Provide students with an example of a traditional passive learning activity, such as a lecture outline or a set of static slides with bullet points. Challenge them to critique the example using action-first principles, identifying missed opportunities for engagement, reflection, or critical thinking. Then, have the students redesign the activity, incorporating specific actions and elements that transform it into an active, engaging experience. Ask them to present their redesigns and explain the rationale behind their changes.

- An interesting variation on all these activities is to have the students conduct them at the beginning of the session (when you're first covering what action-first learning is) and then have them perform the activities after finishing the unit. Have the students compare their outputs and thoughts from a before-and-after perspective.

Key Concepts

- Action-first learning is a philosophical approach to instructional design that emphasizes immediate learner engagement through meaningful actions to activate senses, foster critical thinking, and enhance retention.
- Action-first learning is a broad, adaptable framework that avoids rigid academic definitions, making it accessible for various instructional contexts.
- Engage learners as soon as the learning experience begins to capture attention and create a sense of involvement.
- Use reflection to solidify learning by helping learners connect actions to outcomes, ensuring long-term retention and application.
- Encourage learners to analyze, evaluate, and apply knowledge through active problem solving and decision making.
- Ensure action-first learning activities are practical and closely tied to real-world tasks to enhance relevance and motivation.
- Action-first learning is inspired by constructivist theories (Jean Piaget), experiential learning (John Dewey), and action learning principles (Reg Revans).
- You may encounter resistance to action-first learning approaches. Address learner skepticism or discomfort by framing activities with clear relevance and benefits.

Learning Objectives

At the end of this chapter, learners will be able to:

- Identify the core components of action-first learning.
- Recognize the benefits of action-first learning.
- Evaluate learning experiences through the lens of action-first principles.
- Identify the theoretical foundations of action-first learning.
- Defend action-first approaches to achieve desired learning outcomes.

EXPLANATION OF THE ACTION-FIRST ACTIVITY

This activity engages learners in a creative, collaborative process that deepens their understanding of the principles of action-first learning. By designing a visual representation of a framework, even before they have been fully introduced to the concept, students must immediately think critically about action-first learning. This thinking process exposes gaps in their knowledge. People tend to learn best when they know they don't know something. This activity helps highlight what students don't know about action-first learning.

Additionally, this task activates creativity and engagement by encouraging students to generate unique designs that align with their interpretations of action-first learning. Drawing inspiration from established instructional design models like ADDIE or SAM provides a familiar foundation to guide their thinking, bridging existing knowledge with new concepts.

Collaboration in pairs or small groups promotes dialogue and idea sharing, allowing students to learn from diverse perspectives and hear their thinking out loud in a context where it can be validated or challenged. Presenting their models and explaining their rationale to the larger class supports deeper learning by encouraging students to reflect on their work and on how others envision action-first learning. Using drawing, group discussions, and presentations helps learners connect with the action-first approach on a theoretical and practical level.

After the students have shown and discussed their models, you can introduce the one from *Action-First Learning*. This will provide a chance to compare the models or frameworks they've developed with the "official" version.

2

It's in the Cards

Card Games for Learning

Bring several card decks to class. Divide students into groups and ask them to play a traditional card game, such as Go Fish or poker, for about 15 minutes. Then, ask them to explain how they knew the rules (if they did) and how they learned to play the game. Ask them to describe their familiarity with terms related to playing cards or to list as many terms related to card games as they can. You may want to mention that card games are so well known that phrases like "I've been dealt a bad hand" or "You've got to play the hand you are dealt" have made it into everyday language as colloquialisms. *(Find the explanation at the end of the chapter.)*

Instructor's Overview

This chapter explores how card games can serve as a powerful tool for action-first learning by leveraging familiarity, simplicity, and engagement. Card games are inherently accessible because most learners understand the basic mechanics—terms like *shuffle*, *deal*, *draw*, and *face cards* are immediately familiar. This reduces cognitive load, allowing learners to focus on the content and skills being taught rather than learning the game itself. With their low barriers to entry and universal appeal, card games create a seamless bridge between play and learning.

Card games align with well-established learning design principles by facilitating real-time application, critical thinking, and collaboration. Learners engage actively as they sort concepts, match ideas, or respond to challenges within the game. This immediate use of knowledge reinforces content retention while encouraging decision making and problem solving under pressure. Additionally, card games promote communication through verbal and nonverbal interactions, helping learners articulate their thinking and refine their understanding.

Card games are particularly effective for teaching skills such as memorization, observation, and discernment. They also foster critical and strategic thinking as players plan, analyze, and adapt to game dynamics. Furthermore, card games create opportunities for

practicing leadership and teamwork, especially in scenarios that involve group decision making or rotating leadership roles. Whether teaching simple processes or complex concepts, card games provide engaging, action-oriented learning experiences.

Reflection Questions

1. Ask students to reflect on the type of card games they play with friends and family. Ask them how difficult it was to learn the rules and how often they play. Have them describe the degree to which rules and common moves are taken for granted.

2. Ask learners to reflect on why many people are resistant to role-play exercises and why a card game can overcome that resistance.

Discussion Questions

1. **How do the mechanics of card games (such as sorting, sequencing, matching, and role playing) influence learner engagement and retention of information? Can you think of a training scenario in your field in which a card game would be a more effective instructional tool than traditional methods?**
   Students might provide answers like these:
   - *Sorting requires categorization and critical thinking.*
   - *Sequencing reinforces procedural knowledge.*
   - *Matching strengthens recall and pattern recognition.*
   - *Role-playing enhances decision-making and communication skills.*

   These mechanics create a learning experience in which learners engage with content rather than passively receive information. They have to move the cards physically or drag the cards in an online application; for example, insurance adjustors could sort claims into a covered or noncovered pile. This increased effort makes stronger neural pathways in the learner's mind.

2. **How does the principle of familiarity in game design reduce cognitive load, and why is this important in adult learning? Can you think of other instructional methods that leverage familiarity to enhance learning?**
   Familiarity in game design reduces cognitive load because learners already understand basic card game mechanics, which allows them to focus on the content rather than struggling to learn new rules. This is especially important in adult learning because prior knowledge and experience play a major role in making new information more accessible and reducing resistance to engagement. Other instructional methods that leverage familiarity include using board game techniques, common instructional frameworks like small group discussions or a think-pair-share activity.

3. **Digital card games allow for multimedia elements like animations, videos, and QR codes, while physical card games offer tangible and social interaction benefits. In what situations might one format be preferable over the other, and how can instructional designers ensure effectiveness regardless of the chosen format?**
   Digital card games can incorporate multimedia elements like animations and instant feedback, making them effective for self-paced or large-scale training over a distance using virtual classroom technology. They can also be effective for single player interactions because a computer can simulate other players and compete against a solo learner. Physical card games are best in face-to-face interactions when you want to encourage teamwork and social engagement. They work well when building culture is as important as the learning component.

4. **How can instructional designers balance game complexity with learning effectiveness to ensure that the card game remains engaging but not overwhelming?**
   You need to start with clear learning objectives and choose card game mechanics that align with your goals without adding unnecessary complexity. Keep rules simple, tap into preexisting card game conventions (like drawing cards or matching cards), and reduce the introduction of nontraditional card game elements. Playtesting with a diverse group of learners will help refine the balance between challenge and effectiveness.

5. **Why are card games considered a low-barrier learning tool?**
   Card games are familiar to most people. This means most learners don't have to spend time learning how to play before engaging with the content. This keeps participants focused on learning the necessary information and not on learning the rules of the card game.

6. **Why is sorting an effective game mechanic for learning?**
   Sorting requires learners to categorize and organize information. This helps the learners make sense of concepts and see relationships between ideas.

7. **How can instructional designers ensure a card game remains engaging?**
   Keeping the game simple is one method. If there are too many rules or complex mechanics, learners can get frustrated. While simplicity is important, instructional designers need to add strategy, competition, or collaboration to keeps learners motivated. You can even add surprise elements or a reversal of fortune to keep all players engaged.

8. **Why is playtesting an essential step in designing an instructional card game?**
   Playtesting helps instructional designers see how learners interact with the game and identify any confusion or areas that need improvement. Without playtesting, you risk creating a game that might be too difficult, too easy, or ineffective for learning.

9. **How do card games encourage collaboration among learners?**
   Many card games require players to communicate, negotiate, or work together toward a

common goal. This encourages teamwork, problem solving, and active discussion, which deepens learning. Even in competitive card games, players must interact, analyze one another's moves, and adjust their strategies, fostering engagement.

10. **Why might a card game be more effective than a lecture for teaching complex topics?**
    Lectures mostly involve passive listening, while card games actively engage learners in decision making and the application of knowledge. Playing a card game forces learners to process and use information in real time, making the learning experience more interactive and forcing them to act on their knowledge. This active participation increases their retention and understanding of complex topics.

Five-Question Quiz With Answers

1. **Why do card games reduce cognitive load for learners?**
   A. They rely on familiar mechanics, allowing learners to focus on content rather than rules.
   B. They eliminate the need for decision making and strategy.
   C. They require learners to memorize all rules before playing.
   D. They minimize learner interaction and engagement.

   Answer: A. They rely on familiar mechanics, allowing learners to focus on content rather than rules.

2. **Which card game mechanic is most effective for reinforcing procedural knowledge?**
   A. Matching
   B. Sequencing
   C. Role playing
   D. Sorting

   Answer: B. Sequencing

3. **How do card games encourage strategic thinking?**
   A. By requiring players to memorize facts without application
   B. By forcing learners to react to unforeseen situations and anticipate future moves
   C. By limiting players' choices and interactions
   D. By providing only one possible solution to each problem

   Answer: B. By forcing learners to react to unforeseen situations and anticipate future moves

4. **What is a primary advantage of using card games in training environments?**
   A. They remove the need for discussion and interaction.
   B. They allow learners to passively absorb information without action.
   C. They provide immediate feedback and reinforce learning through gameplay.
   D. They require complex, multistep instructions to play.

   Answer: C. They provide immediate feedback and reinforce learning through gameplay.

5. **Why are playtesting and iteration essential in the development of a learning card game?**
   A. They ensure the game mechanics align with learning objectives and engage players effectively.
   B. They allow designers to add as many complex mechanics as possible before releasing the game.
   C. They help eliminate competition and strategy from the game.
   D. They ensure that only one correct answer exists for every card interaction.

   Answer: A. They ensure the game mechanics align with learning objectives and engage players.

Case Study Questions

1. **The case study on Interpryze's sales training game emphasized the importance of designing for both physical and digital formats. What factors influenced their design decisions when thinking about a physical or digital card game for training, and how might accessibility and learner engagement differ between the two formats?**
   The COVID-19 pandemic played a direct role in the team's decision to pivot, but they were also influenced by the need to maintain engagement, provide immediate feedback, and ensure global access for their dispersed sales team. While the physical game fostered in-person collaboration and spontaneous discussion, the digital version allowed for multimedia enhancements, and scalability.

2. **In the case study, sales professionals were more engaged with the card game than traditional role-playing exercises. What does this suggest about the psychology of learning and engagement? How might other types of workplace training benefit from similar game-based strategies?**
   The increased engagement with the card game suggests that games, by their very nature, can reduce anxiety, lower engagement barriers, and create an interactive atmosphere not found with traditional role-play-based instruction. This aligns with the psychology of learning because active participation, immediate feedback, and low-stakes environments

enhance motivation and retention. Other workplace training programs—such as leadership development, customer service training, or compliance education—can benefit from using card games as well.

Suggested Learner Activities

- Divide students into small groups and ask them to design a card game to teach instructional design concepts. You can provide them with index cards to draw or write on.
- Invite students to convert a common card game (such as poker or Go Fish) into a game focused on learning. Ask them to develop the rules, content, and elements, and then have them playtest the game with fellow students to identify opportunities for improvement on their card game.
- Give students a deck of slides with content. Challenge them to convert the content from the slides into an engaging learning card game.
- An interesting variation on all these activities is to have the students conduct them at the beginning of the session and then have them perform the activities after finishing the unit. Have the students compare their outputs and thoughts from a before-and-after perspective.

Key Concepts

- Card games offer learners low barriers to entry and a high degree of familiarity and comfort.
- Card games for learning are highly versatile and can teach a variety of types of content and topics.
- Card games are excellent tools for teaching skills that require sorting, sequencing, matching, and role playing. They are especially valuable for disguising role-play exercises and gaining buy-in from learners who traditionally resist role playing.
- Card games foster conversation and team building among the players.

Learning Objectives

At the end of this chapter, learners will be able to:

- Identify the elements of card games that make them effective for learning.
- Describe the type of learning outcomes best suited for card games.

- List the design principles to use when developing a card game for learning.
- Describe examples of effective card games for learning.

EXPLANATION OF THE ACTION-FIRST ACTIVITY

Notice that most students are familiar with the instructions for the various card games. The students know basic terms such as shuffle, deal, deck, draw, and suits. If they are playing poker, they know terms like straight, full house, and royal flush. Explain to the students that as an instructional designer or facilitator, you don't need to spend time explaining these terms or mechanics because card games leverage pre-existing knowledge. This familiarity reduces cognitive load and allows learners to focus on the activity's purpose rather than getting bogged down in understanding rules.

3

Pass Go, Collect $200

Board Games for Learning

Bring a well-known board game to class. If the class is virtual, consider using a website (such as Board Game Arena). Divide students into groups and have them play the board game for about 15 to 25 minutes. Ask them to deconstruct the game. What elements were engaging? What parts were confusing? What game pieces where most popular with the group? Ask them how they might modify that game to make it a learning-focused board game. *(Find the explanation at the end of the chapter.)*

Instructor's Overview

This chapter explores how board games serve as an effective learning tool by engaging learners in interactive, strategic, and decision-based experiences. It discusses the fundamental characteristics of board games, explaining how their structured mechanics can be used to create immersive learning experiences. Board games can be used to represent complex systems, helping learner's visualize relationships, recognize interdependencies, and develop critical thinking skills. This chapter also emphasizes how digital adaptations of board games extend accessibility and engagement beyond face-to-face settings.

The effectiveness of board games in learning is examined through key benefits, including their ability to present the big picture, highlight relationships between variables, and simulate real-world tradeoffs. This chapter discusses how games provide an environment for learners to practice decision making with incomplete information, experience the consequences of their actions, and develop systems thinking. This chapter also provides practical design steps, including defining learning objectives, integrating game mechanics, and playtesting to refine the experience. By leveraging board games as instructional tools, educators and trainers can create engaging, high-impact learning experiences that promote long-term retention and skill development.

Reflection Questions

1. Ask students to reflect on the type of board games they play with friends and family. Ask them how difficult it was to learn the rules and how often they play. Have them describe the degree to which rules and common moves are taken for granted.

2. Ask students to reflect on how board games help players recognize the interconnectedness of different roles, departments, or factors in a business or organization. Ask students to think of a specific workplace or classroom scenario when a board game might be more effective than traditional training methods.

Discussion Questions

1. **How do the mechanics of board games influence learner engagement and retention of information?**
   Board games engage learners through a combination of mechanics that tap into intrinsic motivation, cognitive challenge, and social interaction, all of which can contribute to deeper learning and higher retention. Mechanics like competition, resource management, and turn-based strategy create an environment in which players must actively engage with content, make decisions, and adjust strategies based on outcomes. This mirrors many real-world problem-solving situations. The structured yet flexible nature of board games also supports experiential learning by allowing learners to test theories, see consequences in a low-risk environment, and receive immediate feedback through game mechanics.

2. **Can you think of a training scenario in your field when a board game would be a more effective instructional tool than traditional methods?**
   Students might offer up several examples of how a board game might be applied in various professional fields. Look for topics related to processes, such as a sales process or one for approving an insurance claim or creating a new product. Discuss how the game might be used for teaching those processes.

3. **How do board games highlight relationships and dependencies in complex systems?**
   Board games compress time and simulate cause-and-effect relationships, making interdependencies visible. They can show the need for gathering particular resources and force the learner to make tradeoffs among available resources. A board game can show how one decision made earlier in the game, such as investing in cyber security measures, can affect actions later in a game, such as being attacked by a hacker. In another example of how board games can show relationships, a project management board game might reveal how delays in one department affect another department, which can help reinforce the importance of meeting deadlines and communicating delays.

4. **How do board games teach learners to make decisions with incomplete data?**
   In a board game, the players must often make choices based on limited information. A player might know something that other players do not, or part of the board may not be revealed until certain actions are taken. In the game Monopoly, for instance, there are chance cards on the board that are unknown until they are revealed. Thus, players are constantly working with incomplete information. For example, in the game Risk, players must act without full knowledge of their opponent's plans, just as business leaders must navigate markets without knowing what their competitors or government regulators might do.

5. **How can board games facilitate discussions about ethical decision making?**
   There are several ways board games can be used to facilitate discussions about ethics. You could embed an ethical dilemma directly into the gameplay, which would allow the learners to confront it as they play the game. For instance, the game might force players to choose between maximizing profits and maintaining ethical labor practices, prompting reflection on real-world challenges. Ethics could also be discussed after the game is played. You could talk to the players about what ethical decisions they needed to make and what they needed to consider as they made those decisions.

6. **How can board games be designed to encourage collaboration rather than competition?**
   One way to design a collaborative board game is by creating shared objectives rather than pitting one player against another. In a game like Pandemic, for example, each player assumes a role that has a unique ability. This forces players to work as a team to stop the spread of diseases. The success of the group depends on each player's ability to contribute their abilities to the game effort. You can also create interdependence between players so no single player has all the information or resources needed to succeed. For instance, a game designed for corporate leadership training could have players representing different functional areas—such as finance, marketing, and operations—so they must make joint decisions that benefit the entire organization rather than just their department. You could also reduce mechanics that create direct conflict between players and replace them with ones that require or encourage players to share resources, strategize collectively, and find win-win solutions.

7. **What are some potential pitfalls when designing board games for learning?**
   Mistakes in learning board game design can include over reliance on trivia-style mechanics, lack of meaningful decision making, and failing to align game objectives with learning outcomes. A well-designed board game should challenge players to apply knowledge rather than simply recall facts. You could also run into problems if you make the game too learning focused and not include enough fun or engaging gameplay. Be sure to playtest the game prior to release to ensure it is instructional as well as engaging.

8. **How do board games help players see the big picture in a learning scenario?**
   The game board itself often represents a system or ecosystem, allowing learners to visualize interconnections from the board alone. For example, in a supply chain management game, players could see the various elements that make up a supply chain, such as manufacturing plants, distribution centers, warehouses, and retail stores. Board games can also provide a clear cause-and-effect relationship that might not otherwise be visible immediately to the learner. For example, in an actual situation, it might take weeks or months to reveal all the connections and ramifications of the impact of decisions, such as increasing product production, launching a new marketing campaign, or cutting costs. In a board game, these effects can play out within minutes or turns, allowing players to quickly see how decisions influence the entire system. The compression of time enhances learning by providing immediate feedback, reinforcing the consequences of choices, and helping players recognize patterns they might miss in their everyday work.

9. **How can organizations measure the effectiveness of board games as a training tool?**
   One method is to create pre- and post-game assessments. You could provide a quiz or take base-line measurements of performance before and after gameplay to see if there is any change. If you have time and resources, you could also observe behavioral changes in the workplace post-training to see if there are changes. Both of these methods require taking a baseline measurement of pre-game performance. In digital board game games, you could leverage data analytics to track performance metrics, such as the number of successful decisions made, time spent making the decisions, or even resource allocation efficiency. For example, in a project management board game, tracking how often players exceed budget constraints or miss deadlines can highlight gaps in financial literacy or time management skills.

10. **What are some accessibility considerations for board game design?**
    Designers should incorporate elements such as high-contrast visuals, tactile components, and alternative input methods (including voice commands in digital versions) to ensure all learners can fully participate. Consider using QR codes for audio descriptions of cards or elements on the board game. Players with visual impairments could scan a QR code on a card or the game board to receive an audio description of the content using a smartphone. If you're using a digital board game, consider screen-reader compatibility and voice-activated commands that can help players with low vision navigate the game interface. Allow players to work in teams and give them additional time if needed.

Five-Question Quiz With Answers

1. **What is one of the primary reasons board games are effective for learning?**
   A. They provide a passive learning experience.
   B. They require learners to memorize large amounts of information.
   C. They create an interactive, hands-on learning environment.
   D. They eliminate the need for discussion or reflection.

   Answer: C. They create an interactive, hands-on learning environment.

2. **How do board games help players understand the big picture in learning scenarios?**
   A. By isolating small details and minimizing broad concepts
   B. By creating a visual and interactive representation of a system
   C. By emphasizing memorization over strategic thinking
   D. By limiting the number of choices available to players

   Answer: B. By creating a visual and interactive representation of a system

3. **Why are board games particularly effective for teaching tradeoffs?**
   A. They allow learners to make decisions and see immediate consequences.
   B. They remove the need for decision making.
   C. They focus only on luck-based mechanics.
   D. They only allow players to focus on one objective at a time.

   Answer: A. They allow learners to make decisions and see immediate consequences.

4. **What is an advantage of using a randomized board layout in a learning game?**
   A. It ensures that every game session is identical.
   B. It increases memorization requirements.
   C. It enhances replayability and forces players to adapt strategies.
   D. It eliminates the need for strategic decision making.

   Answer: C. It enhances replayability and forces players to adapt strategies.

5. **Why is a shared experience an important learning outcome of board games?**
   A. It allows players to develop a common understanding and reference point.
   B. It ensures that everyone wins equally.
   C. It eliminates the need for reflection after gameplay.
   D. It prevents players from discussing strategies with one another.

   Answer: A. It allows players to develop a common understanding and reference point.

Case Study Questions

1. **In the case study "All for One: The Strategic Alignment Game," how did the board game help managers recognize the impact of their decisions beyond their own divisions? What real-world business challenges does this reflect?**
   The game illustrated how decisions made in one department affect the entire organization, forcing managers to think beyond their individual goals and consider enterprise-wide success. The game introduced interdependent choices for each subgroup, such as tradeoffs between cost, innovation, and employee satisfaction. The required tradeoffs in the game made managers aware of the problem with suboptimization, which reflected the challenges that existed within the organization's departmental silos, such as misaligned goals and competing priorities between groups. Experiencing the real-life tradeoffs in a simulated setting allowed the managers to learn about working together to optimize their efforts in a safe, low-stakes, guided learning event.

2. **The case study describes how the game changed over the course of three days, starting with poor results and leading to improved collaboration. What does this reveal about the learning process in game-based training?**
   The progression from ineffective decision making to strategic collaboration highlights how a board game can provide experiential practice and the chance to apply lessons learned. On the first day, managers focused on individual department gains, but as they saw negative consequences unfold, they adjusted their strategies, communicated more, and worked together in each subsequent round. This is an effective learning cycle in which employees learn by struggling initially but improve through trial, error, feedback, and reflection—all built into the game. The structured debrief sessions between rounds reinforced key lessons, ensuring that learning was not just surface-level gameplay but internalized behavioral change that could be applied in actual business settings.

Suggested Learner Activities

- Ask students to analyze an existing board game's mechanics and discuss how they could be adapted for learning. Divide students into small groups and assign each group a popular board game (such as Catan, Monopoly, Risk, or Pandemic). Each group should play the game and identify key mechanics such as resource management, competition, cooperation, or decision-making with incomplete data. After playing, have students discuss how these mechanics align with learning outcomes.

- Ask students to create a mini board game. In this activity, students should apply instructional design principles by designing a small-scale educational board game that aligns with a specific learning objective. Give them basic materials—such as

index cards, dice, and paper—for game boards. Have the students work in pairs or small teams to create a game that incorporates a clear goal, meaningful decision-making elements, and a mechanic that reinforces learning, such as event cards, dice rolls, or resource management. Once the games are created, have the teams engage in a peer playtest, exchanging feedback to refine gameplay and instructional value.

- Ask students to modify an existing board game to teach a workplace or business concept. They should remix the game's mechanics to create a learning-focused version. Ask the students to adjust rules, game objectives, and game interactions to align with a professional skill, such as team collaboration, leadership, decision making, or financial management.

- Ask students to develop and present a proposal for a board game designed to teach an academic, business or workplace skill. In this activity, have the students work in small groups to create a pitch for a learning-focused board game based on a real-world challenge. Each group should outline their game's target audience, learning objectives, core mechanics, and how it fosters engagement and knowledge retention. They should present their pitch as if they were proposing the game to corporate trainers or educational institutions. The other students in the class can act as a review panel by asking questions and providing feedback on the viability and effectiveness of each game concept.

Key Concepts

- Board games help learners see the big picture in a learning situation through the visual aspects of the board game and by highlighting relationships and interconnection among elements in an organization or situation.

- Board games can be delivered to learners physically in person or online via virtual boards. If you choose to create a physical game, print-on-demand services will allow you to create a highly polished, professional-looking game that will impress learners.

- Opportunities to gather in face-to-face learning situations are becoming more limited. Don't waste those opportunities with traditional lectures or other experiences that fail to engage learners.

Learning Objectives

At the end of this chapter, learners will be able to:

- Identify the elements of board games make them effective for learning.
- Describe the type of learning outcomes that are best suited to board games.
- Identify the design principles to focus on when developing a board game for learning.
- Describe examples of effective board games for learning.

EXPLANATION OF THE ACTION-FIRST ACTIVITY

This activity provides students with a hands-on, experiential approach to understanding game mechanics, engagement strategies, and instructional design principles. By playing a well-known board game, students move beyond theoretical discussions and directly experience how game elements function, what makes a game compelling, and how different mechanics influence player decisions and interactions.

The deconstruction phase of the activity allows students to critically analyze the game's design to identify elements that contribute to engagement and strategic thinking. By examining which aspects were fun, confusing, or highly interactive, students develop a deeper understanding of how mechanics drive player behavior.

When students brainstorm ways to modify the game for instructional purposes, they practice aligning game mechanics with learning objectives, which is an important skill in designing effective learning board games. This helps bridge understanding between entertainment-based gaming and training-focused design.

4

The Great Escape

Escape Rooms for Learning

While it might not be feasible to take your students to a physical escape room, consider purchasing an "escape room in a box" (or several) and use it to introduce the concept of escape rooms for learning. Divide participants into groups of four or five and have them each take a version of the escape room and try to solve it before the other teams. After the teams have completed the escape room in a box, as them to dissect the puzzles, challenges, and obstacles that they confronted. Have them divide each of the elements into general categories that they can include when they create their own escape rooms for learning. *(Find the explanation at the end of the chapter.)*

Instructor's Overview

This chapter explores how escape rooms can be an effective tool for learning, outlining how they can offer an immersive, action-first experience that fosters engagement, collaboration, and problem solving. The chapter begins by defining escape rooms in an educational context and explaining their appeal as a learning tool. It highlights how escape rooms are structured, emphasizing the importance of a compelling theme and storyline, varied puzzle types, and a well-paced challenge. Solving puzzles under pressure helps learners develop critical thinking and teamwork skills while reinforcing knowledge in an interactive way. This chapter also dispels the myth that escape rooms must be physical—they can be designed in virtual formats, as card games, or even as worksheet-based experiences.

A key focus is the instructional design process for creating an escape room for learning. This chapter outlines the essential elements needed for an effective learning experience, including designing puzzles that align with educational objectives, providing an appropriate level of challenge, and ensuring smooth progression through clues and activities. It also discusses the role of observation, nonlinear thinking, and adaptability in escape rooms, showing how these experiences mirror real-world problem solving. This chapter emphasizes the critical role of debriefing in maximizing the learning impact of an escape

room experience. It provides strategies for guiding participants through a reflection process that connects their in-game experiences to real-world applications.

Reflection Questions

1. Ask students to reflect on how they personally interact in an escape room experience either online, physically, or when playing an escape room game. Do they get competitive, confused, or frustrated? Ask them to reflect on what they could add or subtract from an escape room experience that would make it fun, enjoyable, and effective from a learning perspective.

2. Ask students to reflect on the role of teamwork and communication during an escape room experience. How does collaboration contribute to solving challenges, and what lessons can be applied to enhance teamwork in a professional or academic environment?

Discussion Questions

1. **Discuss how the pressure and time constraints in an escape room experience can influence the learner's decision-making and problem-solving strategies. Explain why instructional designers need to consider those elements when creating an escape room experience for learning.**
   It is important to consider pressure and time constraints because they can have a direct impact on learning and on the student's experience. If the pressure is too high, it may lead to anxiety and hinder learning; on the other hand, too little pressure could reduce engagement and diminish the challenge. Instructional designers need to strike the right balance by setting a reasonable time limit that motivates participants without overwhelming them. Moreover, incorporating structured opportunities for reflection and debriefing allows learners to process how they handled pressure, learn from their mistakes, and apply these lessons to real-world scenarios. Playtesting the experience with a small group of learners prior to opening it up to a larger group can help the designer determine if the experience has the right level of pressure and time constraints.

2. **What makes an escape room an effective tool for learning compared to traditional training methods?**
   An escape room experience can provide a focused and immersive learning experience. Unlike many traditional training or teaching methods, escape rooms immediately encourage active participation, foster teamwork, and allow learners to apply critical thinking and problem-solving skills in a safe environment. The engaging nature of the activity can also enhance retention of information and practical skills.

3. **How does the concept of action-first learning apply to escape room experiences?**
   Action-first learning involves placing learners directly into a situation in which they must engage, experiment, and problem solve. Escape rooms challenge participants with puzzles and tasks that require immediate action and decision making, which reinforces learning through experience rather than passive observation.

4. **How can escape rooms help improve communication skills within a team setting?**
   To successfully solve an escape room, a team must constantly communicate so they can share clues, solve puzzles, and coordinate actions. The experience encourages active listening, clear articulation of problem-solving steps, and collaborative dialogue. These are all elements of effective communication. Reflecting after the escape room experience can help learners better diagnose their own communication style and provide insights into how that approach may need to be modified to be more effective.

5. **What design principles should instructional designers consider when creating an escape room for learning purposes?**
   You should create a relevant theme, ensuring a mix of different levels of difficulty of clues, incorporating diverse types of activities, and planning a structured debriefing session so learners can reflect. These elements help maintain engagement, cater to different skill levels of the escape room participants, and reinforce learning objectives by helping participants connect the escape room experience to real-world applications.

6. **How can escape rooms foster nonlinear thinking among learners?**
   Unlike traditional training scenarios that present information sequentially, escape rooms mimic real-world situations in which solutions are not always obvious, so individuals must analyze, hypothesize, test, and iterate to reach an answer. Escape rooms promote nonlinear thinking because they require learners to solve puzzles and challenges that are not step-by-step or neatly laid out. Instead, learners must navigate disparate clues, make connections between seemingly unrelated items, reason with incomplete information, and interpret ambiguous hints.

7. **How can varying the difficulty of clues and puzzles affect the learning experience in an escape room?**
   Different people have different skill sets and knowledge bases. Mixing easy, moderate, and difficult puzzles makes it more likely that all learners can contribute. Easier puzzles build confidence. The more challenging puzzles and clues can stimulate critical thinking and perseverance, as well as keep more advanced learners from getting bored. Designers need to balance levels of difficulty and types of puzzles to maintain learner engagement and prevent boredom (with too many simple puzzles) and frustration (with too many difficult puzzles).

8. **How does an escape room create a safe space for learners to experiment with problem-solving strategies?**
   Escape room experiences provide an environment for participants to freely experiment with problem-solving strategies without the fear of real-world repercussions. Unlike many traditional settings in which mistakes can lead to tangible negative consequences, escape rooms operate within a controlled, game-based framework. This "safe failure" environment encourages learners to take risks, test hypotheses, and try unconventional approaches. The temporary nature of the escape room scenario, along with its game-like design, allows participants to view mistakes as part of the learning process rather than as setbacks. Also, the experimental space enables participants to reflect on their approaches during a debriefing session so they can safely examine what worked, what didn't, and why. Reflection, when done well, helps solidify lessons learned, making it easier for learners to transfer these problem-solving strategies to real-world situations.

9. **How can organizations measure the effectiveness of an escape room experience as a training tool?**
   First, the escape room must be designed so the experience aligns with the learning objectives. For example, if the goal is to enhance teamwork and communication, you can use pre- and post-assessments or surveys to measure changes in participants' perceptions of their collaborative skills. Behavioral observations during the escape room, such as how well participants communicate and delegate tasks, can provide additional insights into skill development. Another method is to use performance metrics within the escape room itself. These might include how quickly teams complete tasks, the number of hints they require, or how effectively they apply learned strategies to solve problems. These in-game analytics can offer valuable data on learners' abilities to think critically, solve problems, and work under pressure. Following the escape room experience, conducting debriefing sessions for participants to reflect on what they learned and how they plan to apply these insights to their roles can add a qualitative layer to the evaluation. This can be complemented by long-term tracking of performance metrics in the workplace.

10. **What are some accessibility considerations for designing an escape room learning experience?**
    For in-person escape rooms, it's important to accommodate individuals with mobility challenges by ensuring the physical space is wheelchair accessible, avoiding narrow passages, and providing alternative methods for interacting with physical elements, such as using vocal commands or accessible tools instead of manual dexterity challenges. For virtual escape rooms, this may involve ensuring compatibility with screen readers, offering keyboard navigation options, and providing closed captions for audio elements. Also, consider how you are incorporating lights, sounds, and other sensory elements to avoid overwhelming participants with sensory sensitivities. Providing alternative ways to access clues can help create

an inclusive experience. For example, you could provide text descriptions for audio-based puzzles.

Five-Question Quiz With Answers

1. **What is one primary reason escape rooms are effective for learning?**
   A. They provide a lengthy, detailed instructional process.
   B. They create a quick, intense experience that keeps learners engaged.
   C. They focus exclusively on individual performance rather than teamwork.
   D. They eliminate the need for debriefing sessions.

   Answer: B. They create a quick, intense experience that keeps learners engaged.

2. **Which of the following skills can escape rooms help develop among participants?**
   A. Nonlinear thinking
   B. Public speaking
   C. Individual performance evaluation
   D. Step-by-step following of instructions

   Answer: A. Nonlinear thinking

3. **How can organizations measure the effectiveness of an escape room experience as a training tool?**
   A. By only focusing on whether participants had fun
   B. Through pre- and post-assessments, performance metrics, and behavioral observations
   C. By ignoring participant feedback
   D. By comparing the escape room to traditional lecture-based training

   Answer: B. Through pre- and post-assessments, performance metrics, and behavioral observations

4. **What is the basic sequence for any escape room experience?**
   A. Observe, evaluate, and execute
   B. Plan, perform, and present
   C. Search, solve, and reward
   D. Listen, learn, and lead

   Answer: C. Search, solve, and reward

5. **What is the benefit of applying pressure in an escape room experience?**
   A. It increases the risk of failure.
   B. It discourages teamwork and collaboration.
   C. It helps learners practice stress management in a safe environment.
   D. It emphasizes the need for perfectionism over experimentation.

   Answer: C. It helps learners practice stress management in a safe environment.

Case Study Questions

1. **What strategies did the escape room design use to encourage teamwork among the new hires at SuperConsultants? How did these strategies help achieve the organization's training goals?**
   The escape room experience employed several strategies to promote teamwork, including the need for collaboration to solve complex puzzles, the use of varied tasks that required different skill sets, and the intentional distribution of clues that necessitated communication among participants. By presenting challenges that were too difficult for any one person to complete alone, the escape room required new hires to delegate tasks, share information, and rely on one another's strengths. These strategies aligned well with the organization's training goals of enhancing collaboration and communication skills. The experience not only seemed to have strengthened the learners' ability to work as a cohesive unit but also provided the leadership team with valuable insights into the interpersonal dynamics and potential leadership qualities within the group.

2. **Considering the debriefing session conducted after the escape room experience, what role did reflection play in reinforcing the learning objectives at SuperConsultants?**
   Reflection during the debriefing session played a crucial role in solidifying the lessons learned in the escape room experience. It provided the employees with the opportunity to analyze their actions, discuss what strategies worked well, and explore areas where they could improve. By connecting the escape room activities to real-world scenarios, the debriefing helped transform the escape room activity into a meaningful learning experience. Participants were encouraged to articulate how the skills they practiced could be applied in their roles as consultants. This reflective process not only reinforced the training objectives but also enhanced the likelihood that new hires would transfer those skills to their day-to-day work, leading to long-term benefits for both the individuals and the organization.

Suggested Learner Activities

- It can be a bit overwhelming to develop an entire escape room from scratch, so I recommend starting small and working up to an entire escape room. Ask each

student to create a single puzzle that could be used in an escape room for learning, and then have them test the puzzles in groups. They could build a logic puzzle, a code-breaking challenge, a physical search-and-find activity, or a riddle tied to a subject area. Afterward, ask students to reflect on the puzzle design process to consider what made the puzzle engaging, what challenges it presented, and how it contributed to learning.

- Because escape rooms require careful sequencing to ensure a logical flow of challenges and solutions, it is a good idea to have instructional design students map out an escape room flow. Create an appropriate number of groups and have each choose a topic (such as communication, finance, or an academic topic) and create a step-by-step flowchart mapping out how participants would progress through their escape room experience. Ask them to include key learning moments, puzzle types, clue distribution, and the final goal. After creating their flowchart, groups can present them to the larger class.

- Ask students to develop a debriefing strategy for a learning-focused escape room. Debriefing is a crucial part of the learning experience in an escape room, and instructional designers need to know how to develop a debrief for these experiences. Create groups and have each develop a structured debriefing session that instructors could use after an escape room activity. The debriefing should outline key discussion questions, reflection activities, and follow-up assignments to help participants connect the experience to real-world skills. Each group should write a paragraph explaining their debriefing approach and why they chose specific discussion prompts. Have the groups role-play a short debriefing session, demonstrating how they would guide participants in processing their escape room experience.

- Ask students to modify an existing game to create an educational escape room. Create groups and have each choose an existing escape room in a box. Then, have them modify the game to include instructional elements. They must adjust the storyline, puzzles, or objectives to align with a specific learning goal. Once they have designed their modifications, they should write a brief summary explaining how their version integrates learning outcomes while maintaining engagement. If possible, groups can test their modified game with another team and provide feedback on its effectiveness as a learning tool.

Key Concepts

- Escape rooms are quick but intense learning experiences that provide a significant instructional impact with minimal investment of the learner's time.

- Escape rooms can be physical or virtual action-first experiences. Virtual escape rooms are an appropriate team building tool for geographically dispersed teams.
- An escape room's story or theme is a vital component of the overall experience.
- A well-planned debriefing process is crucial to ensure that learners gain the desired knowledge or skills from the experience and don't just have fun!
- Working under pressure is a critical aspect of an escape room experience, helping learners who work in high-pressure situations improve their ability to thrive in those environments. Participants can also learn how to treat others when under pressure.
- Escape rooms help learners work on their observational skills, which are often difficult to teach in other ways.
- Escape rooms are effective in helping learners think in a nonlinear way because they allow learners to explore multiple possibilities and make connections between disparate ideas or objects. Nonlinear thinking is valuable for employees dealing with constantly evolving situations on the job.

Learning Objectives

At the end of this chapter, learners will be able to:

- Define elements that can be added to a traditional escape room to make it effective for learning.
- Identify types of learning outcomes that are best for leveraging escape rooms.
- Recognize the basic design principles that should be considered when designing an escape room experience.
- Describe examples of escape rooms that have been used for training and improving employee performance.

EXPLANATION OF THE ACTION-FIRST ACTIVITY

An "escape room in a box" offers a structured and engaging way to introduce learners to the mechanics, problem-solving elements, and collaborative nature of escape rooms without requiring a dedicated physical space or extensive setup. These commercially available experiences are designed to recreate a large, physical escape room. They can include puzzles, hidden

clues, locks (either physical or symbolic), and time-based challenges that mirror a real-world escape room in an accessible, portable format.

The students should have identified categories such as:

- **Logic and deduction puzzles,** such as a Sudoku-style or grid-based puzzle or something involving sequence and pattern recognition.
- **Ciphers and code breaking,** which could involve puzzles such as a Caesar cipher (in which letters are shifted in the alphabet to conceal a message) or a substitution cipher (in which symbols, numbers, or other letters replace the actual letters or numbers); Morse and binary code puzzles also fall under this category.
- **Word and language puzzles,** including anagrams, which are messages or codes created by rearranging the letters of one word into another. Riddles and rhymes also fall under this category.
- **Math and number puzzles,** such as using addition, subtraction, multiplication, or division or solving for a variable in algebraic equations.
- **Hidden objects and search puzzles,** which can include messages embedded in text or hidden on a painting as well as the use of invisible ink or black light to reveal items.
- **Combination locks and symbolic codes,** such as using a three- or four-digit number combination to unlock something or including letter- or image-based locks.
- **Assembly and physical manipulation,** which could be a jigsaw puzzle, overlapping clear or colored sheets that reveal information, or folding or cutting puzzles that might reveal text or numbers.
- **Audio and visual clues,** which are often activated by QR codes in an escape room in a box using a smartphone; this can also include spot-the-difference puzzles.
- **Time-based or sequencing challenges,** which require players to complete actions in a specific order or within a set time frame; for example, player may need to arrange events in a proper sequence or move items into a certain order.

Using an escape room in a box overcomes the capacity limits of a physical escape room. It can also be scaled by dividing students into smaller groups, each working on their own copy of the game. You can even facilitate a whole-class experience by modifying the game so everyone collaborates on solving the same set of puzzles.

An instructional designer who would like to create an escape room for learning should first experience how they work in various formats. Playing through a boxed escape room allows students to become familiar with common puzzle types (such as ciphers, logic puzzles, and hidden messages) and recognize how structured problem solving is created within the framework of the game. This, in turn, will help them develop their own escape room experience for learning.

5

Super Storytelling

Instructional Comics for Learning

Bring an assortment of comic books to class, including superhero stories, graphic novels, educational comics, and classic comic strips. Or, if you're leading a virtual class, create a list of links to online comics. Divide learners into small groups and ask them to examine the comics from both a storytelling and instructional design perspective. Encourage them to analyze how elements such as visuals, dialogue, pacing, and character development contribute to effective storytelling, while also prompting them to consider how these elements could be adapted to teach specific skills, concepts, or behaviors. Instruct them that the guidelines they develop should address the types of learning outcomes best suited to comics, important design principles, and strategies for balancing educational value with entertainment. Have groups present their findings to the class and facilitate a discussion of common elements. *(Find the explanation at the end of the chapter.)*

Instructor's Overview

This chapter looks at how instructional comics can serve as an effective medium for conveying instructional content in an engaging, action-first learning format. It delves into the mechanics of comics, their effectiveness in promoting action-first learning outcomes, and the specific design principles needed to create effective instructional comics. This chapter also discusses using comics to enhance knowledge retention, support cultural representation, and create authentic learning experiences that transcend time and space. It defines and frames comics as more than just entertainment. It discusses how they can be an instructional tool that blend sequential art, narratives, and visuals to teach both technical and soft skills and emphasizes that instructional comics are not solely about humor or superheroes. Instead, they can address serious topics, including safety training, mental health awareness, and professional skill development.

In addition, this chapter discusses the mechanics of comic design, highlighting key principles such as authenticity, relatability, and the ability to transcend time and space. Authenticity is emphasized as a critical element, ensuring that comics reflect the true work environment and resonate with the learners' experiences.

Reflection Questions

1. Ask students to reflect on a time when they learned something through a visual narrative, such as a comic, infographic, or storyboard. What made the experience memorable, and how could similar strategies be applied to instructional design?

2. Ask students to reflect on how instructional comics can support the development of soft skills, such as empathy, self-efficacy, and critical thinking. What specific elements of comics (such as dialogue, visual metaphors, or scenarios) make them suitable for teaching these types of skills?

Discussion Questions

1. **What makes instructional comics an effective tool for learning compared to traditional e-learning methods?**
   Instructional comics combine storytelling with visual elements to create an engaging, action-first learning experience. Unlike traditional e-learning, which may rely heavily on text or static slides, comics present information through sequential art, allowing learners to visualize concepts, see actions unfold, and connect emotionally with characters. This approach embeds learning within a narrative, helping learners understand complex ideas and remember them over time. Additionally, the comic format offers a blend of imagery, text, and storytelling elements instead of presenting content in a traditional way, relying solely on text, charts, and graphs.

2. **What potential obstacles could a designer run into when proposing instructional comics?**
   One challenge is overcoming skepticism from stakeholders who may view comics as too informal or lacking the seriousness required for professional training. Decision makers might associate comics with entertainment rather than instruction, which could lead them to doubt their effectiveness in conveying complex or technical information. Another obstacle could involve budget and resource constraints. The cost of creating custom illustrations, especially if the comic includes interactive or animated elements, could exceed traditional e-learning methods. Additionally, there might be a creative challenge in balancing storytelling with educational content.

3. **How can comics help transcend time and space in instructional design?**
   Comics have the ability to transport learners to different times, places, or even entirely fictional worlds, which can enhance learning by broadening perspectives. For instance, an instructional comic could take learners back in time to witness historical events or into the future to explore potential industry trends. This flexibility allows designers to create scenarios that would be impossible or impractical in real life. Additionally, comics can present

simultaneous events through parallel storylines or show the passage of time quickly through visual cues, helping learners understand cause-and-effect relationships and long-term outcomes.

4. **In what ways can instructional comics promote critical thinking and decision-making skills?**
   Instructional comics can encourage critical thinking by presenting learners with scenarios that require analysis, evaluation, and decision making. For example, a comic might depict a workplace situation in which a character faces a safety hazard, prompting learners to choose how the character should respond. Through visual storytelling, learners can see the consequences of different decisions and reflect on the outcomes. They could even break the fourth wall and ask the learner directly what they think should happen next or to predict a possible consequence based on a learner's decision.

5. **How can instructional designers ensure that comics used for training maintain a balance between entertainment and educational value?**
   To maintain the balance between entertainment and meeting instructional outcomes, instructional designers should start by defining clear learning objectives and ensuring that every story element aligns with these goals. While engaging narratives and humor can capture attention, the instructional purpose must remain at the forefront. Designers can achieve this by integrating instructional content naturally within the story, using characters and scenarios that reflect real-world challenges, and offering opportunities for learners to apply knowledge through interactive elements.

6. **What types of learning outcomes are best suited for instructional comics?**
   Instructional comics are particularly effective for learning outcomes related to soft skills, situational awareness, and complex decision making. They are well-suited for teaching empathy, self-efficacy, critical thinking, and emotional intelligence because they can visualize internal dialogues, depict scenarios with clear cause-and-effect relationships, and present multiple perspectives through storytelling. Comics can also excel in procedural training, such as safety protocols or emergency preparedness, by breaking down step-by-step actions into visually digestible sequences that guide learners through specific tasks or decision-making processes.

7. **What design principles should an instructional designer keep in mind when leveraging instructional comics?**
   Instructional designers should focus on aligning the comic's design with clear learning objectives. Ensuring authenticity and cultural representation also are critical to creating a relatable and inclusive experience, with realistic settings, diverse characters, and appropriate visuals that avoid stereotypes. Designers should craft a purposeful story with a clear narrative arc and include relatable protagonists, clear challenges, and a satisfying

resolution that naturally embeds instructional content within the plot. Visual clarity and simplicity are also important; the art style, panel layout, and use of colors should enhance comprehension and support the learning message without causing distractions.

8. **How can instructional comics be used to transform basic instruction and boring concepts into interesting action-first learning?**
   Designers can leverage comic elements such as storytelling, visuals, and interactivity to create engagement. Instead of presenting information through lectures or dense textbooks, instructional comics can introduce characters, scenarios, and narratives that bring content to life. For example, a comic designed to teach physics might feature a character on a space adventure, using concepts like gravity, velocity, and force to navigate challenges. This narrative approach allows learners to see the practical application of theoretical knowledge in a fun and immersive way. For compliance training, there might be a character who makes mistakes that lead to a disaster because they are not in compliance. Additionally, instructional comics can break down complex information into bite-sized, digestible panels that help reduce cognitive load and make learning more approachable. Metaphors and visual analogies can also make boring content more engaging by making abstract ideas more concrete and relatable.

9. **What are the advantages of using visual metaphors in instructional comics?**
   Visual metaphors help simplify complex concepts by representing abstract ideas through familiar images. For example, depicting anxiety as a storm cloud over a character's head can make an abstract emotion understandable. These metaphors facilitate comprehension by connecting new information to existing knowledge, supporting cognitive processing. They also add creativity and visual interest to the instructional comic, making learning more enjoyable and memorable.

10. **What are some accessibility considerations for incorporating instructional comics into a learning experience?**
    Provide alt text for all images, including comic panels, so learners using screen readers can access the visual information. Also consider color contrast and avoid relying solely on color to convey meaning, which supports learners with visual impairments or color blindness. Choose clear, legible fonts and ensure that dialogue and captions are not overly crowded within speech bubbles. Providing audio descriptions or narrated versions of the comic can enhance accessibility for learners with visual impairments or those who prefer auditory learning. Additionally, including closed captions for any audio components ensures that hearing-impaired learners are not excluded. For digital instructional comics, interactive elements should be keyboard-navigable and compatible with assistive technologies.

Five-Question Quiz With Answers

1. **What makes instructional comics particularly effective for teaching complex concepts?**
   A. They replace all written content with images.
   B. They simplify abstract ideas through visual metaphors and storytelling.
   C. They require learners to interpret information without guidance.
   D. They focus only on humor and entertainment without educational value.

   Answer: B. They simplify abstract ideas through visual metaphors and storytelling.

2. **Which design principle is essential when creating instructional comics for diverse audiences?**
   A. Using only black-and-white visuals to avoid distraction
   B. Ensuring authenticity and cultural representation in characters and settings
   C. Avoiding the use of storytelling to maintain a formal tone
   D. Focusing primarily on fictional and fantastic scenarios

   Answer: B. Ensuring authenticity and cultural representation in characters and settings

3. **How can instructional comics enhance learner engagement compared to traditional training methods?**
   A. By reducing information to only text-based slides
   B. By combining visuals and narratives to create immersive learning experiences
   C. By focusing solely on theoretical explanations without practical examples
   D. By eliminating interactive elements to streamline the learning process

   Answer: B. By combining visuals and narratives to create immersive learning experiences

4. **Which learning outcome is best suited for instructional comics?**
   A. Only teaching memorization and rote learning
   B. Developing critical thinking, empathy, and decision-making skills
   C. Focusing exclusively on physical skill development
   D. Limiting content to highly technical, data-driven information

   Answer: B. Developing critical thinking, empathy, and decision-making skills

5. **How do instructional comics support action-first learning?**
   A. By presenting immediate challenges and scenarios for learners to explore actively
   B. By starting with lengthy theoretical explanations before showing any visuals

C. By avoiding decision-making scenarios to reduce complexity
D. By providing only static information without interaction

Answer: A. By presenting immediate challenges and scenarios for learners to explore actively

Case Study Questions

1. **What primary challenges did the instructional design team face when developing the instructional comic for nursing training in Bihar, India?**
   The instructional design team faced several significant challenges while developing the instructional comic for nursing training. One of the primary challenges was designing for a low-resource, low-literacy audience. Many of the nurses who participated in the training program had limited access to advanced technology and varying levels of literacy, which required the team to create highly visual content with minimal reliance on text. Additionally, the team had to ensure that the instructional comic was culturally relevant and resonated with the local audience, including considerations for language, visual representation, and appropriate storytelling techniques. Technical challenges also arose due to limited internet connectivity in the region, leading to the need for offline deployment of the training materials on portable drives. The instructional design team addressed these challenges by adopting a superhero genre in a Bollywood style, using visual storytelling to enhance engagement and retention while maintaining accessibility and scalability.

2. **How did the instructional comic address the challenge of maintaining consistency in nursing practices across a low-literacy, low-resource region?**
   The instructional comic provided a standardized, repeatable learning resource that could be accessed by nurse trainees as often as necessary. The comics depicted clear, visual step-by-step procedures for obstetric care, reducing the reliance on textual instructions and making the content more accessible. By creating an engaging narrative around Super Divya's battles against metaphorical bugs like fear and hurry, the comic reinforced correct practices and helped nurses internalize critical safety protocols. Additionally, distributing the comic via portable drives allowed it to reach remote clinics without reliable internet access, ensuring that trainees received consistent and accurate information regardless of their location.

Suggested Learner Activities

- Ask students to select a learning topic that's relevant to their professional or academic interests and create a short instructional comic that conveys key concepts or skills. Provide a basic comic panel template and encourage them to use simple drawings or digital tools to visualize their ideas. Emphasize that artistic skill is less important than effectively communicating a clear and engaging story with instructional value. Have students share and explain their decision-making process for

their instructional comic. Ask them to point out how their comic aligns with the topics discussed in this chapter.

- Provide students with a scenario in which a character faces a challenging situation, such as giving difficult feedback to a co-worker. Ask them to create a comic storyboard or panel that illustrates the character's internal dialogue, emotions, and potential outcomes of different approaches. Then, have them present their storyboards and discuss the visuals they chose to depict the character's emotions. Emphasize how visualizing internal thoughts can enhance emotional intelligence.

- Provide students with a difficult or boring concept, such as managing stress, following safety protocols, or understanding data privacy, or wearing proper protective equipment. Ask them to develop three visual metaphors to represent the topic in an instructional comic. For example, they might depict stress as a storm cloud or safety protocols as a superhero shield. Ask them to create simple sketches or descriptions of their metaphors and share them with the class.

- Ask students to develop an instructional comic that outlines a step-by-step process or procedure, demonstrating how visual narratives can simplify complex tasks and enhance procedural learning. Either provide a process or allow students to choose one to illustrate in their comic. You may even want to make it simple (like folding a piece of paper a certain way or creating a paper airplane) and then have them exchange their comic with the other students to see if they can follow the procedural comic. Afterwards, discuss the difficulties and strengths of following this approach.

Key Concepts

- Authenticity begets engagement, which leads to an increase in retention. Achieving authenticity in a comics-based learning experience requires research about the learners' environment that goes beyond learner personas.

- Comics can transcend time and space by exploring alternative perspectives in storytelling and transporting learners into fictional worlds that are often believable enough to be real.

- Comics have no limits in terms of what they can portray. They can convey anything from the nuances of abstract ideas to diverse cultural representations to intense emotions. Comics can also leverage universal design to address details that are difficult to capture in other media.

- Comics can increase learners' awareness, deepen meaning, and challenge critical thinking skills.
- Using images in sequential narratives, comics leverage the same recognizable patterns of schematic knowledge people usually recognize in writing.
- Through stories, humans create meaning from their experiences and learn to make decisions, which is why stories can be helpful tools in teaching causal reasoning.
- Digital storytelling requires less cognitive effort than exposition because of the narrative framing of an experience.

Learning Objectives

At the end of this chapter, learners will be able to:

- Describe the elements of instructional comics that make them effective for learning.
- Explain what type of learning outcomes are served best by instructional comics.
- List design principles to be considered when designing comics for learning.
- Identify examples of comics used effectively for learning.

EXPLANATION OF THE ACTION-FIRST ACTIVITY

This comic review exercise engages learners through active exploration and critical analysis. By examining existing comic books, learners can see firsthand how visual narratives convey complex ideas, evoke emotions, tell a story, and guide audiences through an instructional experience. This exploration helps demystify the comics medium, especially for instructional designers who might not immediately see the value of using comics for learning.

By examining comics through both storytelling and instructional design perspectives, learners consider how entertainment-based media can be adapted for instructional purposes. They learn to identify elements that make stories engaging and translate these elements into instructional strategies. By creating guidelines, learners must synthesize their observations and apply critical thinking. This process not only reinforces this chapter's content but also encourages learners to envision how they might incorporate comics into their own instructional design projects.

6

Choose Your Path

Branching Scenarios for Learning

Locate a branching scenario online or use one that you have created. Ask students to deconstruct the branching scenario and record the elements. For this activity, students should examine the branching scenario to understand decision making, the role of reflection, character roles, and learning outcomes. They should create a visual map of the scenario using flowchart techniques, detailing decision points, branches, outcomes, and character influences. You can then initiate a group discussion in which students share their scenario maps, compare different approaches, and reflect on whether the scenario achieved its intended educational goals. Ask students to evaluate design elements that contributed to the scenario's effectiveness and discuss potential improvements. *(Find the explanation at the end of the chapter.)*

Instructor's Overview

This chapter delves into the power of branching scenarios as an instructional design strategy, focusing on how they simulate real-life decision making and its consequences within a safe, controlled environment. It discusses the mechanics of branching scenarios—including creating immersive and realistic environments, providing nuanced choices, and integrating reflection points—and also highlights how they can accelerate expertise development by allowing learners to practice repeatedly with targeted feedback.

In addition, this chapter provides practical examples of branching scenarios in various fields. It emphasizes design principles like balancing complexity, maintaining narrative cohesion, and ensuring accessibility.

Reflection Questions

1. Ask students to reflect on a time when they had to make a difficult decision in a professional setting. What were the consequences of that choice, and how might a branching scenario have helped them prepare for that situation?

2. Ask students to reflect on how branching scenarios help develop empathy and emotional intelligence among learners.

Discussion Questions

1. **What are the key elements of a branching scenario, and why are they important in learning design?**
   The key elements include decision points, branches, outcomes, and characters as well as the use of storytelling. They are important because they allow learners to actively engage with content, explore the consequences of decisions, and practice problem solving in a safe environment.

2. **How do branching scenarios help build expertise through simulated experiences?**
   Branching scenarios accelerate the building of expertise by providing learners with simulated experiences that replicate real-world decision making in a controlled, safe environment. Through these scenarios, learners can engage in repeated practice by encountering diverse situations and exploring various decision paths without the risks associated with real-world mistakes. The accelerated timelines within branching scenarios allow learners to see the immediate consequences of their choices, which might take weeks or months to manifest in real life. This rapid feedback loop enhances learning by enabling quick adjustments and deeper reflection on the outcomes of decisions. Additionally, branching scenarios provide targeted feedback and opportunities to retry scenarios, allowing learners to refine their strategies, build confidence, and develop critical-thinking and problem-solving skills. Over time, this repeated exposure to complex scenarios and the ability to safely experiment with different approaches contribute to a faster and more effective development of expertise.

3. **Why is it important to include both correct and incorrect choices in a branching scenario, and how do these options contribute to learning outcomes?**
   Including both correct and incorrect choices in a branching scenario is a strategic approach that enhances critical thinking, decision-making, and problem-solving skills. When learners encounter a range of choices, they must analyze the situation, evaluate potential outcomes, and make informed decisions. This mirrors real-world scenarios in which the correct choice is not always apparent, promoting active engagement and deeper cognitive processing. Providing incorrect choices helps address common misconceptions and highlight typical pitfalls within a specific context. By intentionally designing choices around frequent errors, instructional designers can proactively fill knowledge gaps and reinforce key concepts. This method ensures learners are not passively moving through the scenario but are instead critically engaging with each decision point.

4. **Why is it important to include nuanced choices in a branching scenario, and how does this approach enhance critical thinking?**

Including nuanced choices in a branching scenario is important because it elevates the complexity and authenticity of the learning experience, closely mirroring real-world decision making. In reality, decisions are rarely binary or straightforward; they often involve evaluating multiple factors, managing competing priorities, and balancing short-term gains against long-term consequences. Nuanced choices challenge learners to think critically by presenting them with options that may all seem plausible but carry different risks, benefits, and ethical considerations. Instead of merely identifying a correct or incorrect answer, learners must weigh tradeoffs, consider diverse perspectives, and predict potential outcomes based on limited information. This approach enhances critical thinking by forcing learners to engage deeply with the scenario, analyze the nuances of each choice, and anticipate the ripple effects of their decisions

5. **How can instructional designers ensure that branching scenarios used for training maintain a balance between engagement and instructional impact?**
   Instructional designers can maintain a balance between engagement and instructional impact in branching scenarios by aligning scenario design with clear learning objectives while incorporating elements that captivate and sustain learner interest. To achieve this balance, designers should start by defining the desired learning outcomes and ensuring that every decision point, character interaction, and scenario branch reinforces those objectives. This approach prevents scenarios from becoming overly complex or veering off topic while maintaining a strong focus on the instructional goals. Engagement can be enhanced by using immersive storytelling, realistic characters, and scenarios that closely mimic real-world challenges. Incorporating multimedia elements—such as visuals, audio, and interactive features—can help create a dynamic and compelling learning experience.

6. **What types of learning outcomes are best suited for branching scenarios?**
   Branching scenarios are particularly well-suited for learning outcomes that involve decision making, critical thinking, problem solving, and the application of knowledge in complex or dynamic situations. They are effective for training learners to navigate situations with choices that are unclear and require them to evaluate multiple factors and consider potential consequences. Learning outcomes related to soft skills (such as leadership, communication, empathy, and conflict resolution) align well with branching scenarios because they allow learners to practice nuanced interactions in a safe, simulated environment.

7. **What design principles should an instructional designer keep in mind when creating branching scenarios?**
   Scenarios need to align closely with the required learning objectives. They should be realistic and relevant, mirroring real-world situations with authentic challenges and characters who learners can relate to. Set them in a realistic setting and environment. Designers should also strive to maintain a balanced level of complexity with nuanced choices and

even tradeoffs when there isn't a clear response. Branching scenarios should also include feedback mechanisms and opportunities for reflection.

8. **What are the potential pitfalls of overly complex branching scenarios, and how can designers strike a balance between complexity and clarity?**
   Overly complex branching scenarios can present significant challenges for both learners and instructional designers. When a scenario includes too many decision points, intricate branching paths, or overly detailed storylines, it can lead to cognitive overload, which causes learners to feel confused and overwhelmed. Instead of focusing on the learning objectives, the learners may struggle to navigate the scenario or become distracted by unnecessary details. Complex scenarios can lead to frustration if the logical flow of decisions is difficult to follow or if the learner feels lost in an endless loop of choices and consequences. Excessive complexity also creates development challenges, leading to longer production times, higher costs, and difficulties in maintaining and updating the scenario over time.

9. **What role do behavioral and contextual cues play in creating realistic branching scenarios, and why are they significant for skill transfer to real-life situations?**
   Behavioral cues might include the tone of voice, body language, or emotional responses of characters within the scenario, which prompt learners to interpret nonverbal signals and adjust their approach accordingly. Contextual cues, on the other hand, relate to the environment, setting, and situational factors presented in the scenario. These could include background sounds, visual elements, or specific situational details that influence the learner's decisions. Embedding these cues into branching scenarios can enhance engagement but also help learners practice situational awareness, critical thinking, and decision making in a risk-free environment. These cues are vital for skill transfer because they can bridge the gap between simulated learning and real-world application.

10. **What strategies can an instructional designer use to ensure that a branching scenario remains accessible to all learners?**
    Accessibility in instructional design involves considering the diverse needs of learners, including those with visual, auditory, cognitive, and motor impairments. One key strategy is to ensure compatibility with screen readers, allowing visually impaired learners to access on-screen text, instructions, and branching options through audio output. Providing descriptive alt text for images and ensuring meaningful link text further enhances screen-reader compatibility. Incorporating closed captions and transcripts for audio and video elements is also essential. This practice not only benefits learners with hearing impairments but also supports those who prefer or need to read along with spoken content. Designers should also ensure that scenarios are navigable using only a keyboard, with logical tab orders and accessible controls, to accommodate learners with limited motor skills. Avoiding time-limited tasks or offering options to extend time can help reduce anxiety and create a more comfortable learning pace for all participants.

Five Question Quiz With Answers

1. **What is one primary advantage of using branching scenarios for learning?**
   A. They allow learners to avoid making decisions.
   B. They provide immediate feedback and simulate real-world consequences.
   C. They focus solely on theoretical knowledge without practical application.
   D. They eliminate the need for instructional objectives.

   Answer: B. They provide immediate feedback and simulate real-world consequences.

2. **How do behavioral and contextual cues contribute to branching scenarios?**
   A. By providing irrelevant information that distracts learners
   B. By adding complexity without instructional value
   C. By creating authenticity and enhancing skill transfer to real-life situations
   D. By simplifying scenarios to eliminate decision making

   Answer: C. By creating authenticity and enhancing skill transfer to real-life situations

3. **What is a potential pitfall of an overly complex branching scenario?**
   A. It ensures maximum engagement for all learners.
   B. It can lead to confusion and hinder learning.
   C. It simplifies decision-making processes.
   D. It eliminates the need for feedback mechanisms.

   Answer: B. It can lead to confusion and hinder learning.

4. **Why is it important to include nuanced choices in a branching scenario?**
   A. To limit the learner's decision-making options
   B. To force learners to guess rather than analyze situations
   C. To mimic real-world decision making in which choices are rarely clear-cut
   D. To make the scenario as simple as possible

   Answer: C. To mimic real-world decision making in which choices are rarely clear-cut.

5. **Why is it important to build reflection points into a branching scenario?**
   A. To fill space without adding educational value
   B. To allow learners to skip critical-thinking steps
   C. To encourage self-assessment and deepen learning through thoughtful analysis
   D. To distract learners from the main objectives

   Answer: C. To encourage self-assessment and deepen learning through thoughtful analysis

Case Study Questions

1. **How did VenaMedTech leverage branching scenarios to overcome the challenges associated with live role-play sales training?**
   VenaMedTech transitioned from a labor-intensive, in-person role-play sales training program to a scalable and efficient branching scenario model. The live role-play sessions required significant resources, including trainers, facilitators, and travel expenses for sales representatives. By creating a branching scenario, the company replicated the critical-thinking and decision-making elements of live role plays while dramatically reducing training time from 26 months to under a year. The scenario allowed sales representatives to enter a fictional hospital environment, engage with realistic characters, and navigate sales conversations. By offering diverse decision paths, the branching scenario provided opportunities for sales reps to explore different strategies and receive targeted feedback, which reinforced learning objectives and promoted skill development in a scalable, cost-effective way.

2. **What were some of the specific design strategies used in VenaMedTech's branching scenario to enhance the sales representatives' learning experience?**
   VenaMedTech's training development team employed several effective design strategies in their branching scenario. They created a realistic hospital setting where learners could choose which departments to visit. Including an "inside champion" character provided learners with varying levels of useful information and added complexity and realism to the scenario. The sales manager character offered critical feedback and guidance, simulating mentorship that sales representatives might receive in a live training environment. An innovative twist required learners to gauge their confidence in their responses, which helped balance their confidence with actual knowledge. By embedding nuanced choices, realistic feedback, and confidence assessments, the branching scenario not only enhanced learners' sales skills but also ensured they developed the appropriate level of confidence to apply these skills in real-world sales situations.

Suggested Learner Activities

- Ask students to map out a branching scenario on paper with physical tools (such as sticky notes or a whiteboard) or online with digital tools. Have them work in small groups to define an instructional goal, brainstorm possible decisions, and create a flowchart showing the scenario's branches and outcomes. They should then present the flow to their peers and explain their decision points, branches, and reflection points. This is an especially helpful exercise if the students do not have access to software tools for creating an actual branching scenario. It is also good for emphasizing the need to design a branching scenario before you start developing it.

Often students will want to jump into development without fully designing all the branches and interactions.

- Ask students to apply the principles of branching scenarios by using PowerPoint to design a simple, interactive scenario. Learners should create a scenario that presents a realistic decision-making challenge related to their field of study or professional interest, such as handling a difficult customer interaction, managing a workplace conflict, or navigating an ethical dilemma. Use the relevant video in my YouTube playlist to help them understand how to create branching within PowerPoint. Once learners complete their scenarios, they should test them with a peer, who should navigate through the scenario to ensure all links work and the storyline flows logically. Finally, learners should present their scenarios to the class, explaining their design choices and reflecting on the learning experience.

- Ask students to create a chatbot to develop a role play. Use the relevant video in my YouTube playlist to help them understand how to create an artificial intelligence (AI) powered chatbot with branching within PowerPoint. Have them use a voice-based AI tool on their smartphone to conduct the branching scenario in real time, practicing sales, leadership, or other appropriate skills. Ask students to share their AI chatbot and have them role play using the chatbots created by their peers.

- Ask students use an authoring tool (such as Articulate Storyline, Adobe Captivate, iSpring, Near-Life, Lectora, or BranchTrack) to create a branching scenario focused on handling a difficult workplace conversation. Have them begin by defining the instructional goal and then develop a simple storyboard outlining key decision points and potential outcomes. Using the authoring tool, learners should build the scenario by creating realistic characters, embedding multimedia elements, and setting up branching paths based on learner choices. Throughout the design process, learners must incorporate at least three reflection points and provide nuanced feedback for each branch. Finally, ask students to share their completed scenarios with peers for feedback, refining their work based on insights gathered from playtesting and reflection. If students have access to LinkedIn Learning, you can assign them my "Designing Scenario-Based Learning" course if they're struggling to design their branching scenario.

Key Concepts

- Branching scenarios provide an interactive and immersive learning experience. When learners are put in the driver's seat—making decisions and experiencing the consequences—they become more engaged and invested in the learning process.

- Branching scenarios can simulate real-world situations so learners can practice making decisions in a risk-free environment, which can help them develop critical-thinking and problem-solving skills.

- Learners receive specific and targeted feedback about their decisions in a branching scenario, which is crucial for reinforcing learning and correcting misconceptions. This instant feedback loop helps learners understand the implications of their choices and promotes reflective learning.

- Online branching scenarios provide access to a wide audience, regardless of location or time constraints. This scalability ensures that effective training is not limited by geographical barriers or limited resources.

Learning Objectives

At the end of this chapter, learners will be able to:

- List the elements of branching scenarios that make them effective for learning.
- Describe the types of learning outcomes best suited for branching scenarios.
- Explain the basic design principles that should be considered when designing branching scenarios for learning.
- List examples of branching scenarios for learning.

EXPLANATION OF THE ACTION-FIRST ACTIVITY

Asking students to map out decision points, branches, outcomes, and characters helps them visualize how a branching scenario is created. Comparing scenario maps and dis-cussing different approaches helps students benefit from collaborative learning by gaining new perspectives and refining their ideas through dialogue with peers. Deconstructing a branching scenario not only enhances learners' comprehension of the mechanics behind branching scenarios but also deepens their ability to design and evaluate them.

7

Live and In-Person

Live Interactive Experiences for Learning

Using an audience response system (ARS), such as Poll Everywhere, UMU, or Mentimeter, use the information in this chapter to create an interactive scenario for your class. For example, tell the class, "You are tasked with designing a live training session for new employees. The goal is to teach them effective communication skills while keeping them engaged. Will you start with a traditional lecture or a role-playing exercise?" As the class makes choices in the story you developed, guide them toward an understanding of the topic and provide feedback on their responses. Keep it light but also draw attention to the instructional takeaways. When you are finished, ask the class to compare that experience with a traditional lecture providing the same type of content. *(Find the explanation at the end of the chapter.)*

Instructor's Overview

This chapter emphasizes the value of live, interactive learning experiences in creating dynamic and engaging educational environments. Live sessions presented in person or virtually offer opportunities to foster communication, soft skills, and problem solving through real-time interaction. This chapter explains how live experiences contribute to building an organizational culture by promoting collaboration and creating a shared frame of reference.

In addition, this chapter describes the role of live learning in enhancing human relatedness, drawing on several theories that underscore the importance of creating a safe, inclusive space where learners feel comfortable expressing their views.

It provides guidance on how to take a structured approach to creating interactive, action-first sessions and emphasizes logistical preparation, from organizing small groups to conducting dry runs. This chapter describes how integrating hands-on practice, improvisation, and opportunities for reflection facilitate memorable and effective live learning experiences.

Reflection Questions

1. What action-first strategies discussed in this chapter do you think would be most effective in your own teaching or training environment or for your own learning outcomes? Why do you believe these strategies would resonate with you or your learners?

2. After exploring the different types of interactive activities (such as construction activities, interactive narratives, and problem-based learning), which method do you feel most comfortable implementing in a live setting? What steps could you take to build confidence and skills for facilitating this type of activity?

Discussion Questions

1. **What makes live interactive learning experiences more effective than traditional lecture-based approaches?**
   Live interactive learning experiences promote active participation, which helps enhance retention and the application of new knowledge. These types of activities allow for real-time feedback, immediate clarification of misunderstandings, and the opportunity for learners to apply knowledge through experiential activities like role playing, construction exercises, and problem-solving scenarios.

2. **How does incorporating action-first elements in live learning sessions affect learner engagement?**
   Action-first learning elements capture learners' attention from the beginning so can connect new information to existing knowledge and create a sense of ownership over their learning, leading to higher engagement and better outcomes.

3. **How can live learning experiences help build organizational culture?**
   Live learning experiences can bring together individuals from different backgrounds and roles, promoting collaboration and shared experiences. Unlike asynchronous or independent learning methods, live interactions foster real-time communication and build relationships that can significantly strengthen an organization's culture. These interactions can also help create a common understanding and a sense of belonging.

4. **What challenges might instructors face when implementing live interactive activities, and how can they overcome them?**
   Challenges include managing diverse group dynamics, ensuring relevance to learners' on-the-job activities, and maintaining engagement among all participants. To overcome these challenges, instructors need to establish clear expectations, create a safe space for sharing ideas, and use varied interactive methods to maintain motivation and engagement among learners.

5. **How can live interactive learning experiences help clarify "gray areas" or complex concepts for learners?**
   Unlike prerecorded or static learning materials, live sessions allow learners to ask questions as soon as confusion arises. This immediate access to clarification helps prevent misconceptions from taking root and ensures that learners maintain a clear and accurate understanding of the material. For example, in a live scenario, if a learner struggles to grasp a nuanced concept (such as the difference between coaching and mentoring in a managerial context), they can voice their confusion directly. The instructor can then provide tailored explanations, offer concrete examples, or even pivot the session to include a quick role-playing exercise to illustrate the difference. Additionally, when learners ask questions during live sessions, the responses benefit not only that individual but also the entire group, promoting collective understanding.

6. **How can live learning experiences enhance communication skills among participants?**
   Activities like group discussions, debates, and role-playing scenarios require participants to articulate their thoughts clearly, ask clarifying questions, and respond to peers thoughtfully. These real-time interactions mirror workplace communication challenges, allowing learners to develop skills that are directly transferable to their professional roles. In addition, the live learning sessions offer a chance for immediate feedback, which is crucial for improving communication abilities. Instructors can observe interactions and provide guidance on aspects such as tone, body language, and message clarity. Participants also benefit from the feedback provided by peers who are directly observing their communications.

7. **How does using action-first activities in live learning sessions affect knowledge retention and application?**
   Action-first activities facilitate the transition from theory to practice. By immediately engaging in tasks—such as role playing, problem-based learning, or interactive scenarios—learners can experiment with new concepts and receive instant feedback. This helps bridge the gap between understanding and real-world application. Active involvement also promotes deeper cognitive processing, which enhances long-term retention and the ability to recall and use knowledge when needed.

8. **What role does immediacy play in the effectiveness of live interactive learning experiences?**
   When learners receive immediate responses to their questions or actions, they can adjust their understanding and approach in real time. This prevents misconceptions from becoming ingrained and allows the instructor to address knowledge gaps as they arise. Immediate feedback also enhances motivation because learners can see the direct impact of their contributions and gain confidence from instant validation or constructive guidance. In addition, the immediacy of live sessions enables instructors to adapt their teaching strategies on

the fly. If a poll reveals widespread confusion about a concept, the instructor can pivot to provide an additional explanation or introduce a spontaneous activity to reinforce understanding.

9. **What strategies can instructors use to ensure all learners participate actively in live interactive sessions?**
   One effective method is using structured activities like think-pair-share or small group discussions in which learners first reflect individually and then discuss in pairs or small groups before sharing with the larger class. This layered approach helps quieter participants build confidence and provides multiple opportunities for involvement. Additionally, incorporating interactive tools like polls, quizzes, and digital whiteboards allows learners to contribute anonymously, reducing the pressure of speaking up in a large group setting. Instructors can also set clear expectations for participation from the beginning of the learning experience. Establishing a safe and inclusive environment encourages learners to share their thoughts without fear of judgment.

10. **How can live interactive learning experiences contribute to building critical thinking and problem-solving skills?**
    Live, action-first activities challenge participants to analyze information, evaluate different perspectives, and make informed decisions in real time. The immediacy of live environments enhances critical thinking. As learners share ideas and receive feedback from instructors and peers, they must continuously assess and refine their thoughts. Group discussions and collaborative problem-solving exercises promote analytical skills as participants navigate diverse viewpoints and construct well-reasoned arguments. This dynamic process helps learners develop not only problem-solving strategies but also adaptability and resilience, which are essential in professional settings.

Five-Question Quiz With Answers

1. **What is a recommended approach for designing effective live learning experiences**
   A. Relying solely on lecture-based instruction
   B. Prioritizing improvisation without the need for preparation
   C. Delivering an interactive, narrative story
   D. Avoiding hands-on practice to prevent mistakes and providing exciting visuals to accompany the lecture

   Answer: C. Delivering an interactive, narrative story

2. **How do live learning experiences help build a stronger organizational culture?**
   A. By limiting interactions to only specific departments
   B. By promoting collaboration and creating shared experiences among diverse teams
   C. By focusing primarily on individual, self-paced learning activities
   D. By avoiding discussions on organizational values and goals

   Answer: B. By promoting collaboration and creating shared experiences among diverse teams

3. **Which of the following is a key benefit of real-time feedback in live learning sessions?**
   A. It allows misconceptions to persist without correction.
   B. It prevents learners from interacting with instructors.
   C. It provides immediate clarification, enhancing understanding and retention.
   D. It eliminates the need for postsession evaluations.

   Answer: C. It provides immediate clarification, enhancing understanding and retention.

4. **What is a primary goal of incorporating interactive audience response tools into a live session?**
   A. To increase the lecture time by reducing audience interaction
   B. To engage learners actively and collect real-time responses
   C. To restrict feedback only to the instructor
   D. To avoid using technology during live sessions

   Answer: B. To engage learners actively and collect real-time responses

5. **Which method can help create a safe and inclusive atmosphere in a live learning environment?**
   A. Setting clear expectations and promoting respectful communication
   B. Discouraging questions from learners during the session
   C. Only allowing experienced participants to lead discussions
   D. Focusing exclusively on independent learning tasks

   Answer: A. Setting clear expectations and promoting respectful communication

Case Study Questions

1. **Why did the training team choose the interactive narrative approach for Super Ortho's sales training instead of a traditional lecture-based method?**

The interactive narrative approach offered a more engaging and immersive learning experience compared to traditional lectures. Sales representatives at Super Ortho needed to refine their communication and persuasion skills, which are best developed through practice rather than passive listening. The interactive narrative provided a simulated, real-world scenario that mirrored the complexities of actual sales interactions. Additionally, the competitive element of the interactive narrative, which involved sales teams using the audience response tool, kept participants motivated and fully engaged. This method also allowed the training team to collect real-time data on learners' strengths and areas for improvement.

2. **What were some of the measurable outcomes of using the interactive narrative technique during the plan of action (POA) meeting?**
   One significant benefit was increased engagement among participants. The sales representatives reported feeling more involved and connected to the learning material compared to traditional training sessions. In terms of business outcomes, Super Ortho observed a substantial increase in product acquisition and usage in the four months following the training program. This improvement indicated that the sales team had not only absorbed the training content but also applied the skills and strategies effectively in the field.

Suggested Learner Activities

- Ask students to participate in a think-pair-share activity that will encourage them to engage deeply with the course content by promoting individual reflection, peer interaction, and group discussion. Start by presenting a thought-provoking question or scenario related to this chapter, such as asking for the best way to engage learners. Then, give everyone five to eight minutes to think about the question individually, allowing them to form their own ideas and responses. Next, pair up the students and ask them to discuss their thoughts, share perspectives, and refine their understanding. Finally, bring everyone together and ask each pair to share their insights with the larger group.

- Provide students with access to an audience response system (such as Mentimeter, UMU, or Poll Everywhere). Begin by demonstrating key features of the chosen tool, such as live polling, word clouds, ranking activities, and open text responses. Provide a brief tutorial on how to create slides, integrate interactive elements, and interpret audience feedback during a presentation. Then, ask each student to develop a short presentation (five- to seven-minutes long) that tells a story related to a course topic. The presentation must include at least three interactive elements using the audience response system, such as a multiple-choice question, open-ended response, and a poll. After each presentation, engage the class in a discussion about the experience. What worked well in terms of audience engagement? How

did the interactive elements influence the storytelling process? Provide constructive feedback on both storytelling techniques and the technical use of the response system.

- Divide the students into groups of three to four. Next, tell each group they need to create an interactive activity, which should be action oriented and foster participation, discussion, or problem solving. (Examples of potential activities can be found in *Action-First Learning*.) Provide 20–25 minutes for each group to create their activity. Once all the activities have been created, the students should rotate through each group's station to participate in the activity. Have one person from each group stay behind at their station (whether that's physical location in a classroom or a virtual breakout room online) to explain the activity. After all the groups have rotated through each station, bring the class together for a debrief. Discuss which activities were the most engaging and why, highlight examples of effective facilitation, and encourage students to reflect on how they can apply what they learned in the future.

- Divide students into triads or dyads. Provide each group with a case study focused on a business scenario, a scientific research dilemma, a historical event, or any other topic suited to the learning objectives. The case study should include a clear context, a central problem or challenge, and enough detail to support the development of a multilayered story. Ask each group to convert the case study into an interactive, narrative story. Have the students create decision points, questions, and elements commonly associated with an audience response system, such as open-ended questions, word clouds, and interactive polls. Use the relevant video in my YouTube playlist to help them understand how to create an interactive narrative story. Each group should then present their narrative to the class, introducing the setting, presenting the initial scenario, and guiding the audience through the story using their interactive elements. After each presentation, conduct a debriefing session. The presenting group can share their experience of creating the story and discuss which audience responses surprised them and how these influenced the story's progression. Facilitate a class discussion on the different narrative paths explored and the learning outcomes associated with each.

Key Concepts

- Interactive learning events can build a stronger organizational culture by bringing peers together to get to know one another and network.

- Live interactive experiences can enhance participants' communication skills and provide opportunities for collaboration.

- Shared experiences often foster community and become shared points of reference.
- Live learning events can answer questions for participants and help clarify gray areas or address uncertainty among learners.
- Learners often gain a sense of spontaneity and improve their ability to improvise during live learning experiences. Participants in live learning events engage in real-time discussions and debates requiring them to quickly process information, adapt their thinking, and articulate responses on the spot.
- Live interactive events are highly effective for hands-on instruction. Learners can touch and manipulate equipment and understand much more about physical tools, instruments, and machinery than is possible during virtual events.

Learning Objectives

At the end of this chapter, learners will be able to:

- List the action-first elements that can be added to live learning experiences to make them more effective.
- Describe the types of learning outcomes best suited for live learning experiences and events.
- Apply appropriate design principles when designing a live learning experience.
- Describe examples of action-first exercises and activities to facilitate learning in live events.

EXPLANATION OF THE ACTION-FIRST ACTIVITY

An interactive scenario and an ARS demonstrate the key concepts in this chapter. The active participation of the students demonstrates how such an activity enhances focus and motivation. This approach also leverages the power of real-time feedback. When learners make choices through the ARS, you can immediately provide insights, explain the reasoning behind optimal choices, and correct misconceptions, reinforcing the value of the action-first methodology. When students compare the interactive experience you provided them with a traditional lecture, they will gain a deeper understanding of why action-first, interactive methods can lead to better engagement and learning outcomes.

8

Get Real

Augmented Reality for Learning

Ask students to download an augmented reality (AR) smartphone app that allows them to place an object or item into their environment. (For example, the Ikea Place app allows you to place a piece of furniture in your environment.) Ask them to interact with the AR features, whether it's learning a new function, visualizing assembly instructions, or accessing just-in-time guidance. When they're finished, ask them to write down their thoughts and feelings about using the app. Then, facilitate a discussion related to how they experienced the app. Point out how this simple experience mirrors larger-scale AR implementations in learning environments. *(Find the explanation at the end of the chapter.)*

Instructor's Overview

This chapter introduces AR as an action-first learning technology. It describes the diverse applications of AR in L&D and highlights how AR can reduce the learning curve by offering contextualized, step-by-step guidance directly within the learner's environment. It also describes how AR makes the invisible visible, allowing learners to explore hidden components of machinery or internal anatomy without invasive procedures. It discusses how AR can help visualize abstract concepts by transforming complex data into interactive, spatially oriented visualizations, aiding in decision-making and comprehension.

This chapter also discusses design considerations for AR learning experiences in areas such as safety, accessibility, and engagement and provides information on incorporating haptic and sound-based cues, developing clear safety protocols, and selecting the appropriate spatial orientation (intimate, personal, social, or public) based on the desired learning outcomes needed for the project.

Reflection Questions

1. How do AR action-first learning experiences help learners visualize abstract or complex concepts, and how can this capability be leveraged to enhance understanding in specific training scenarios?

2. How can AR transform traditional learning experiences into action-first learning opportunities, and what benefits does this bring to learner engagement and retention?

Discussion Questions

1. **What are some key advantages of using AR in L&D compared to traditional training methods?**
   AR can blend digital information with real-world environments in real time, which is not available with traditional methods. AR can also engage learners by allowing them to manipulate digital elements in a physical space. This interactive element can improve retention by connecting theoretical knowledge to practical application. AR can also provide immediate, just-in-time learning opportunities that allow the learner to see the instructions right in front of them.

2. **How can AR reduce the learning curve for complex tasks or procedures?**
   AR can reduce the learning curve by providing learners with step-by-step instructions directly within their physical environment, right in their line of sight. This eliminates the need to switch between a task and external references like manuals or videos. The real-time guidance ensures that learners receive the exact information they need at the precise moment they need it. This reduces the learning curve because the learner doesn't need to memorize instructions prior to performing the task. Instead, the AR experience walks the learner through how to perform the task.

3. **What types of learning outcomes are best suited for AR experiences?**
   AR is particularly effective for learning outcomes that require hands-on practice, spatial understanding, or emotional engagement. It supports affective learning outcomes, particularly in building empathy and understanding diverse perspectives. By simulating experiences from another person's point of view—such as understanding the challenges faced by individuals with disabilities or immersing employees in customer scenarios—AR can create powerful, emotional learning experiences.

4. **What safety considerations must instructional designers consider when creating AR learning experiences?**
   One major concern is ensuring that AR applications do not obstruct the learner's view of their surroundings, especially in high-risk environments like construction sites,

manufacturing facilities, or healthcare settings. Designers should integrate safety protocols into the AR experience, such as alerts to maintain awareness of surroundings or automatic pauses if the learner moves into a dangerous area. Safety measures might also include providing clear instructions on how to use AR devices correctly and offering reminders to take breaks to prevent eye strain or physical discomfort. Designers should also try to account for accessibility, ensuring that learners with disabilities can safely and effectively use the technology.

5. **How can AR facilitate real-time performance support in the workplace?**
   AR can offer performance support by delivering just-in-time information directly within an employee's field of view through a screen, such as smartglasses, a tablet, or a smartphone. When performing tasks that require precision or specific procedures, AR can provide visual overlays, step-by-step instructions, and other elements to guide workers through each stage of a task. This real-time guidance can help reduce errors, increase efficiency, and build confidence, especially when employees are working in fast-paced or complex environments.

6. **How do haptic and sound-based cues enhance AR learning experiences?**
   Haptic feedback, which involves the use of vibrations or tactile sensations, provides a tangible connection to virtual objects, making digital interactions feel more realistic. This sensory feedback helps bridge the gap between digital simulation and real-world application, leading to improved skill transfer and confidence in performing tasks. Sound-based cues offer auditory guidance and enhance spatial awareness. Spatial audio, which replicates how sounds occur in the physical world, can direct learners' attention to specific elements within an AR scenario.

7. **What are some practical ways to integrate AR into virtual tours and orientation training?**
   During new employee onboarding, AR can guide individuals through a physical space by providing digital overlays with information about facilities, safety procedures, and even historical references related to a company's history. AR can also simulate emergency scenarios, showing virtual hazards or exit routes to prepare individuals for real-life situations. AR-enabled tours can also include interactive elements, such as quizzes or challenges, to engage learners and determine their understanding of key information.

8. **What challenges might instructional designers face when developing AR learning experiences, and how can they overcome them?**
   AR environments may require physical movement, which can present safety risks if learners become too focused on digital elements and lose awareness of their surroundings. Designers need to implement clear safety guidelines, such as reminders to maintain spatial awareness and take regular breaks. To make the AR experience more universal, designers can include audio descriptions, haptic feedback, or adjustable text and visual elements to accommodate

diverse needs. You should also be ready to address technological limitations, such as learners using several different types of devices for the AR experience and possible internet access problems or lag times.

9. **How can instructional designers use AR to teach step-by-step procedures effectively?**
   AR can teach step-by-step procedures by providing learners with real-time, visual guidance overlaid on the physical environment. The learner can direct their AR device (such as smartglasses, a tablet, or a smartphone) toward a QR code on a piece of machinery, and then the app on that device can recognize it and provide virtual diagrams of the proper steps and approach to troubleshooting or repairing it.

10. **What design principles should instructional designers prioritize when creating AR learning experiences?**
    When designing AR learning experiences, instructional designers should prioritize safety, usability, and engagement. Safety is particularly important in AR experiences because learners are interacting with digital elements while navigating real-world environments. Designers also need to ensure that AR interfaces are intuitive and accessible, as well as maintain learner interest and keep their attention.

Five-Question Quiz With Answers

1. **What is a key benefit of using AR in training scenarios?**
   A. AR primarily focuses on theoretical content without real-world application.
   B. AR offers a passive learning experience with minimal interaction.
   C. AR provides just-in-time guidance and enhances real-world task performance.
   D. AR eliminates the need for physical practice through virtual simulations.

   Answer: C. AR provides just-in-time guidance and enhances real-world task performance.

2. **How does AR help reduce the learning curve for complex tasks?**
   A. By offering lengthy training manuals before practice
   B. By providing step-by-step, contextual instructions during task performance
   C. By focusing exclusively on lecture-based learning
   D. By requiring learners to memorize information before application

   Answer: B. By providing step-by-step, contextual instructions during task performance

3. **Which type of learning outcome is particularly well-suited for AR applications?**
   A. Memorization of historical dates and facts
   B. Hands-on procedural training and real-time performance support

C. Passive observation of recorded lectures
D. Theoretical discussions without practical application

Answer: B. Hands-on procedural training and real-time performance support

4. **Which of the following is a safety consideration when designing AR experiences for learners?**
   A. Encouraging learners to focus solely on digital elements without physical awareness
   B. Providing clear safety instructions and maintaining spatial awareness
   C. Eliminating all physical movement from AR experiences
   D. Using low-contrast colors to minimize distractions

   Answer: B. Providing clear safety instructions and maintaining spatial awareness.

5. **Which of the following is an example of using AR to make the invisible visible?**
   A. Displaying a printed manual next to a piece of equipment
   B. Overlaying a 3D model of internal machinery components onto a real piece of equipment
   C. Watching a video tutorial on a computer screen
   D. Reading step-by-step instructions from a textbook

   Answer: B. Overlaying a 3D model of internal machinery components onto a real piece of equipment

Case Study Questions

1. **What challenges did the pharmaceutical company face in training its sales representatives, and how did AR address these challenges?**
   The primary challenge faced by the pharmaceutical company was the gap in new hire training, particularly regarding the anatomy and physiology of the eye. The initial training course heavily relied on using 2D images and PDFs during remote sessions, which failed to effectively convey the complexity of the human eye's structures. As a result, sales representatives arrived at in-person training sessions underprepared, diverting valuable time away from advanced topics. AR helped bridge this gap by transforming traditional 2D images into interactive 3D models of the eye. The AR application allowed learners to explore anatomical structures spatially and engage with content dynamically, leading to a deeper understanding of the material

2. **What lessons learned from this case study could be applied to other AR training implementations?**

One important lesson from this case study is the critical role of thoughtful user interface (UI) and user experience (UX) design in creating effective AR experiences, which can be applied to all AR projects. The success of the AR application relied heavily on the design process, which included thorough storyboarding, prototyping, and iterative testing. Addressing the challenges of integrating AR elements with traditional training materials, such as adding QR codes to existing PDFs, helped create a seamless and user-friendly experience. Additionally, the experiential learning team strategically used prototypes to gain organizational buy-in. By investing in a functional prototype, the team could effectively communicate the benefits of AR to stakeholders, gaining approval and support for the project. Many similar projects would benefit from the prototyping process before investing in a full AR product.

Suggested Learner Activities

- Divide students into teams of three to five and ask each group to download an AR application (such as *Pokémon Go* or a similar app). Ask each team to explore the app, and encourage them to safely move around their environment, capture Pokémon, and interact with different game elements. While engaging with the app, ask students to take notes on the specific AR features (such as digital overlays, location-based interactions, gamification elements) and the app's approach to providing feedback and rewards. After about an hour or so of using the app (which may require multiple class periods), ask the teams to map the features they discovered to a potential learning application. When they've finished, have each team present their ideas to the class. Discuss the similar ideas and original ones, as well as how designers should think about those ideas when they create AR-based instruction.

- If AR software is not available, consider a paper-based activity. Divide students into small teams of three to give participants, ensuring each group has access to materials for creating storyboards, such as large sheets of paper, markers, sticky notes, or digital tools like Google Slides, Canva, or a dedicated storyboarding app. Assign each team a specific learning scenario or allow them to choose one based on their interests or academic focus. Instruct each team to outline a complete AR learning experience through their storyboard. Encourage students to consider the learner's journey step-by-step. The outline should include everything from the introduction of the AR experience to the engagement with content and the assessment or application of knowledge. Once the teams have completed their storyboards, bring the group back together for presentations. Each team should present their storyboard, explaining their design choices and how their AR experience supports an action-first learning approach.

- Ask students to create an AR scavenger hunt using either a paper-based storyboarding approach or an actual AR application (such as Zapworks or Adobe Aero). Inform the students that the scavenger hunt should guide participants through a series of clues, challenges, or learning tasks that incorporate AR elements, such as digital overlays, interactive 3D models, or location-based prompts. Students should focus on aligning each step of the scavenger hunt with clear learning objectives and include opportunities for participants to apply knowledge, solve problems, or engage with content in a meaningful way. Once they've finished, students should present their scavenger hunt concept to the class, explaining the educational purpose, the AR features they used, and how the experience promotes active, action-first learning. This can be done either as an individual or a group project.

- A variation on the previous exercise could be to ask the students to create an AR action-first learning experience that involves evacuating a building or another safety related topic to help them become familiar with the thinking requirements in the design process.

Key Concepts

- AR is a technology that overlays digital information (such as images, videos, or 3D models) onto the real-world environment via a screen (such as a smartphone, smartglasses, or a tablet).

- AR can be used for learning by superimposing a sequence of steps into the learner's field of vision and then walking them through the steps one by one.

- Because AR can take place anywhere, it can be used effectively by technicians in the field as well as employees on the shop floor to provide immediate, context-sensitive assistance.

- The invisible can be made visible through AR; images and information can be superimposed on the outside of an object, such as a machine or a human, and the learner can then see what otherwise might be hidden inside.

- AR can be used to provide a learner with a different perspective; for example, it might alter the user's eyesight or provide a dramatically enlarged version of a key protein in the bloodstream or a miniaturized solar system.

- AR can transform abstract data into visual representations that are easier to comprehend than 2D images on a computer screen. For instance, learners can walk around the images and see them from different angles.

- Learning via AR can create more immersive experiences. For example, immersive storytelling can make historical and cultural education more engaging and memorable.

Learning Objectives

At the end of this chapter, learners will be able to:

- List elements that can be added to an AR experience to make it effective for learning.
- Describe the type of learning outcomes best suited for leveraging AR.
- Synthesize basic design principles in a design document for creating an AR experience.
- List examples of AR experiences that could improve employee performance.

EXPLANATION OF THE ACTION-FIRST ACTIVITY

This action-first learning activity serves as a hands-on introduction to the core concepts of AR covered in this chapter. The activity not only engages learners immediately but also provides a concrete example of how AR technology could possibly transform learning from a passive to an active experience. Use the discussion and activity to explore AR's impact on skill acquisition, performance support, and learning engagement.

9

Becoming an Avatar

A Metaverse for Learning

There are several educational environments within Second Life, a robust virtual reality (VR) world that allows digital exploration. You can use it on your computer or with VR goggles for a more immersive experience. Ask your students to visit one of the educational locations within Second Life, such as the Museum of the Maya and Inca Civilizations, which includes exploring Mayan astronomy, math, writing, architecture, and clothing. (The information is provided in both Spanish and English.) Ask students to explain how they felt during the experience and what they learned. You can have them keep a journal of the experience, marking aspects that were particularly interesting or boring. *(Find the explanation at the end of the chapter.)*

Instructor's Overview

This chapter introduces the metaverse as a platform for immersive learning experiences. It describes how the metaverse leverages VR technologies to create highly realistic simulations that engage learners using multiple senses and illustrates how metaverse environments enable learners to practice both hard and soft skills safely.

This chapter also explores design considerations for metaverse learning experiences, emphasizing safety, accessibility, and interactivity. It provides guidance on choosing the right technology platform, creating realistic 3D assets, and incorporating sensory feedback through haptic devices and sound cues. It also addresses the need for structured onboarding tutorials to help learners navigate virtual environments and avoid cognitive overload.

Reflection Questions

1. How can immersive and sensory-rich experiences in the metaverse enhance learning outcomes compared to traditional training methods? Provide examples from your own learning or teaching experiences.

2. Reflect on a scenario in which trial and error was a critical component of learning. How could a metaverse-based simulation provide a safe and effective environment for that type of learning experience?

Discussion Questions

1. **What are the key benefits of using the metaverse for L&D, and how do they compare to traditional e-learning approaches?**
   By creating virtual environments that simulate real situations, learners can practice skills in a safe and controlled setting. The metaverse provides a hands-on, action-first approach designed to enhance knowledge retention by allowing learners to actively participate and practice skills rather than passively consume content. The metaverse can also engage multiple senses through visual, auditory, and even haptic feedback, making learning experiences more realistic and effective. Compared to traditional e-learning—which often relies on videos, readings, and quizzes—the metaverse allows learners to experiment, make mistakes, and receive immediate feedback. It also supports experiential learning, which allows learners to reflect on their actions and improve over time.

2. **How does the concept of action-first learning in the metaverse contribute to skill retention and learner engagement?**
   Using the metaverse, an instructional designer can place a learner directly into a realistic scenario in which they must apply knowledge and skills to succeed. This approach reinforces learning through practice. When learners interact with virtual environments, solve problems, and make decisions in real time, they develop a deeper understanding of the subject matter. This method is particularly effective for building muscle memory and gaining practical experience that can be transferred to real-world situations. By promoting trial and error in a risk-free setting, action-first learning helps learners build confidence and competence. The immersive nature of the metaverse also means learners are less likely to become distracted because the virtual environment captures their full attention.

3. **How can metaverse-based training help learners manage stress and build resilience in high-pressure scenarios?**
   Metaverse-based training allows learners to experience high-pressure situations in a safe and controlled virtual environment. In a simulated stressful scenario, such as an emergency response or a difficult workplace conversation, learners can practice managing their emotions and responses without risks. This type of training helps build resilience by allowing individuals to confront and navigate challenging situations repeatedly, gaining confidence with each iteration. Also, the learner or instructor can pause, reflect, and receive or provide feedback during or after the experience. This can help learners develop coping strategies and a calm, methodical approach to working under pressure.

4. **What opportunities does the metaverse offer for practicing critical-thinking and decision-making skills?**
   The metaverse can use a simulated environment to present learners with complex challenges in which they must analyze information, assess risks, and make informed decisions. The real-time feedback available in these types of situations allows learners to see the consequences of their decisions immediately, fostering deeper understanding and learning from mistakes.

5. **What are the potential pitfalls of overusing immersive technology in training, and how can you avoid them?**
   Over-reliance on metaverse-focused learning experiences can lead to challenges such as cognitive overload, digital fatigue, and reduced effectiveness of training. The novelty of the metaverse may initially captivate learners, but prolonged sessions without adequate breaks can diminish engagement and retention. To avoid these pitfalls, you should balance metaverse experiences with other forms of learning and provide structured breaks during sessions.

6. **What strategies can instructional designers implement to assess learner performance effectively in metaverse-based training environments?**
   In metaverse environments, you can capture performance data in real time, including learners' actions, places they visit, items they touch, and response times. This quantitative data can track individual and group performance. In addition, you can also use qualitative assessments such as reflective debriefs, peer evaluations, and instructor observations. Best practice is a combination of both qualitative and quantitative methods to gain an entire assessment of the learners' performance.

7. **How can instructional designers use metaverse simulations to support compliance training and ensure adherence to organizational policies?**
   The metaverse can transform compliance training from static presentations into interactive and engaging experiences. Learners can participate in metaverse environments to apply compliance knowledge to make decisions. The experiential learning approach helps reinforce the importance of following organizational policies and builds the confidence needed to handle compliance-related situations correctly in the workplace.

8. **How can digital twins and avatars enhance the realism and effectiveness of training in the metaverse?**
   Digital twins and avatars can enhance the realism and effectiveness of training within the metaverse by providing highly accurate and interactive representations of real-world environments and individuals. Digital twins are virtual replicas of physical assets, equipment, or entire environments that replicate real conditions and behaviors. In training situations, digital twins allow learners to interact with virtual objects as they would in reality, such as

operating machinery, troubleshooting equipment, or practicing procedures. This level of realism enables learners to gain hands-on experience in a safe and controlled setting, reducing risks and costs associated with traditional training methods.

9. **How can the metaverse facilitate teamwork and collaboration among geographically dispersed learners?**
   The metaverse can provide a virtual space where learners, represented by avatars, can participate in group activities, simulations, and collaborative problem-solving exercises from their home or work computers as if they were actually in that space. This sense of presence helps break down geographical barriers, enabling team members from different parts of the world to work together seamlessly. The ability to interact within a 3D space, use virtual tools, and collaborate on tasks fosters a sense of engagement and teamwork better than standard remote learning methods. Teams can engage in virtual workshops, participate in group training simulations, or work together on complex projects.

10. **What potential challenges might organizations face when adopting metaverse technologies for training purposes?**
    Developing custom virtual environments, purchasing necessary hardware (such as VR headsets and haptic devices), and investing in software platforms can require significant financial resources. Additionally, maintaining and updating these technologies to ensure compatibility with evolving platforms and devices may introduce additional ongoing expenses. Organizations must ensure their systems can support metaverse technologies, which often demand high-speed internet, advanced graphics processing, and data storage capabilities. There are also data security and privacy concerns because metaverse environments often collect a wealth of data, including user interactions, behaviors, and potentially biometric information.

Five-Question Quiz With Answers

1. **What is one of the primary advantages of using the metaverse for training compared to traditional e-learning?**
   A. It only focuses on theoretical knowledge.
   B. It allows learners to passively consume content.
   C. It provides a hands-on, action-first learning experience.
   D. It limits interaction between learners and instructors.

   Answer: C. It provides a hands-on, action-first learning experience.

2. **How does the metaverse support experiential learning?**
   A. By providing 2D and text-based realistic content.
   B. By offering immersive, real-world simulations.

C. By limiting learner interactions to quizzes.
D. By focusing solely on theoretical knowledge.

Answer: B. By offering immersive, real-world simulations.

3. **What role do digital twins play in metaverse training?**
   A. They provide physical replicas of equipment.
   B. They create virtual replicas of real-world assets.
   C. They are used only for entertainment purposes.
   D. They replace human instructors entirely.

   Answer: B. They create virtual replicas of real-world assets.

4. **How can the metaverse help learners build resilience in high-pressure scenarios?**
   A. By avoiding all stress-related elements
   B. By providing controlled exposure to stressful situations
   C. By limiting decision-making opportunities
   D. By offering only prerecorded scenarios

   Answer: B. By providing controlled exposure to stressful situations

5. **How does the metaverse most effectively facilitate teamwork among geographically dispersed learners?**
   A. By isolating learners from one another
   B. By creating shared virtual spaces for collaboration
   C. By offering access over the internet
   D. By allowing text-based messaging

   Answer: B. By creating shared virtual spaces for collaboration

Case Study Questions

1. **What primary challenge did the US Navy face in the case study?**
   The Navy needed to deliver training content to its personnel without incurring the costs and logistical hurdles associated with traditional physical training environments. Real-world training would require complex setups—including access to submarines, ships, machinery, and specialized equipment—all of which are not only expensive to procure and maintain but also frequently in use for actual operations. Moreover, coordinating live training exercises would involve considerable planning, scheduling, and risk management.

2. **What advantage did the handheld gaming PC offer to the Navy's VR training program?**

The handheld gaming PC allowed for flexibility in delivering training content, particularly in environments where using VR headsets was not feasible due to limited space or strict security protocols. This adaptability ensured consistent training opportunities for all sailors.

Suggested Learner Activities

- Divide students into teams of three to five and ask them to download a metaverse or VR experience that was created by CenarioVR or LearnBRite. Ask each team to spend time exploring the experience, encouraging them to safely move around their environment and interact with one another. While engaging with the experience, ask students to take notes on the specific features used. After about 30 minutes to an hour of exploring the environment (which may require multiple class periods), ask the students to map the features they discovered to a potential learning application. Once they've finished, have each team present their ideas to the class. Discuss the similar ideas and original ones, as well as how designers should think about those ideas as they create VR-based instruction.

- If VR or metaverse software is not available, consider this paper-based activity. Divide students into teams of three to five participants, ensuring each group has access to materials for creating storyboards, such as large sheets of paper, markers, sticky notes, or digital tools like Google Slides, Canva, or a dedicated storyboarding app. Assign each team a specific learning scenario or allow them to choose one based on their interests or academic focus. Instruct each team to outline a complete VR or metaverse learning experience through their storyboard. Encourage students to consider the learner's journey step-by-step. This outline should include everything from the introduction of the VR experience to the engagement with content and the assessment or application of knowledge. Once the teams have completed their storyboards, bring the group back together for presentations. Each team should present their storyboard, explaining their design choices and how their VR experience supports an action-first learning approach.

- Consider obtaining virtual real estate in Second Life. If you own the land, you and your students will be able to build on it to create learning experiences. If that's possible, assign your students into groups of three or four and ask them to set up a learning-based scavenger hunt. At each location, have the students create an object that provides information or content critical to completing a learning objective. Have each group go through the other groups' scavenger hunts and then bring everyone back for a debriefing of the activity. (There are other metaverse environments that you may want to consider, such as Decentraland.)

Key Concepts

- The metaverse is an expanded version of virtual reality and spatial computing. The terms are not the same but are often used interchangeably. The common trait is that the learner's senses are immersed in the digital experience, making them feel like they are in the actual place and situation.
- Creating a metaverse learning experience provides a safe environment for the learners to practice both technical (hard) skills and social (soft) skills, such as communication, leadership, teamwork, and collaboration.
- Using an avatar allows the learner to control a virtual version of themselves, who interacts with the environment, enabling a dual learning experience of direct participation and objective observation from a safe distance. This is one of the few learning environments in which that experience can happen.
- The ability to recreate digital twins of equipment, places, and tools in the metaverse allows learners to realistically practice techniques and procedures.
- The metaverse supports almost infinite branching in scenario situations because a real person is operating the avatar and can respond to any question. This means dialogue and choices don't need to be pre-scripted like they do with some other learning delivery tools. The use of nonplayer characters powered by AI will expand the opportunities for unscripted actions.
- In the metaverse, you can achieve total sensory immersion through goggles or headsets, earphones, and haptic feedback devices to enhance the learning experience and make it highly realistic.
- The metaverse allows you to create unlimited resources and scenarios, which supports scalable, cost-effective training solutions. This is especially helpful when dealing with expensive real-world setups that require lots of resources and equipment.
- The metaverse overcomes geographical distances because learners all feel like they are in the same physical space at the same time.

Learning Objectives

At the end of this chapter, learners will be able to:

- Describe the elements that can be added to learning experiences in VR or a version of the metaverse to make them effective for learning.

- List the type of learning outcomes that are best suited for metaverse-type learning experiences and events.
- Synthesize the basic design principles to consider when designing a VR or metaverse experience to facilitate learning.
- List examples of VR or metaverse learning environments and activities that facilitate learning.

EXPLANATION OF THE ACTION-FIRST ACTIVITY

For some students, this activity might be their first experience in a VR learning environment. Helping them understand potential navigation, orientation, and acclimation issues will make them better designers. The journal can help them reflect on the experience and consider elements they liked or didn't like. The hands-on experience should help them experience the learning content rather than simply reading about it. Asking students to reflect on their feelings during the experience taps into the affective domain of learning and builds an understanding that an immersive experience can also result in emotional outcomes.

10

An Anytime, Anywhere Coach

AI-Powered Coaching for Learning

Create a virtual chatbot and have your students interact with it to understand how chatbots can be used for coaching. (To learn how to set up a chatbot using ChatGPT, go to my YouTube channel and search the Action-First Learning playlist for a video called "Setting Up an Action First Chatbot.") Once you have created your chatbot, provide the URL to your students and challenge them to stump the chatbot. You can even have the students download the app to their smartphones and interact with the chatbot using their voice. *(Find the explanation at the end of the chapter.)*

Instructor's Overview

This chapter introduces AI-powered coaches as scalable and personalized tools that provide immediate, targeted feedback and motivation, enhancing both hard and soft skill development. It demonstrates how AI-driven tools offer adaptive learning experiences that support skill mastery through deliberate practice and emphasizes the pedagogical benefits of personalized learning, such as mirroring the zone of proximal development theory (in which AI coaches challenge learners just beyond their current abilities to maintain engagement and prevent frustration).

In addition, this chapter provides practical design considerations for creating effective AI-powered coaching experiences, focusing on interactivity, motivational elements, visual feedback, and progress tracking. It outlines a step-by-step guide for developing an AI-powered coach, including defining clear objectives, conducting user research, ensuring accessibility, selecting appropriate technology, and implementing analytics.

Reflection Questions

1. How can incorporating immediate, targeted feedback from an AI-powered coach enhance the learning experience compared to traditional coaching methods, and what impact might this have on learner motivation and engagement?

2. Reflect on a scenario when an AI-powered coach could make a difference. Explain how the coach would help with a person's performance in such a situation and how it would make a difference.

Discussion Questions

1. **What are the key benefits of using AI-powered coaches for personalized learning, and how can they enhance the effectiveness of workplace training?**
   AI-powered coaches can provide immediate guidance and tailored feedback to adapt learning paths to individual needs. These AI tools can assess a learner's existing knowledge through interactive activities and quizzes, allowing them to deliver customized support. This personalized approach ensures that learners engage with material that is neither too difficult nor too easy, aligning with the zone of proximal development theory. This alignment helps maintain motivation, reduces frustration, and promotes skill acquisition. Additionally, employees can access coaching on-demand, which is particularly advantageous for a busy professional or a technician at a customer site.

2. **How do AI-powered coaches use immediate, targeted feedback to support the concept of deliberate practice, and why is this important for skill development?**
   Deliberate practice involves focused, repetitive practice with immediate feedback, targeting specific aspects of performance for improvement. AI-powered coaches provide that kind of support by delivering instant, personalized feedback during practice sessions, which can not only correct mistakes but also provides actionable suggestions for improvement. The continuous feedback loop enabled by AI ensures that learners can make incremental adjustments and see tangible progress. This approach prevents learners from getting bored and keeps them challenged at an optimal level.

3. **What role does motivation play in the effectiveness of AI-powered coaching, and how can AI tools integrate motivational elements into the learning process?**
   Motivation is a critical factor in learning because it drives engagement, persistence, and a willingness to overcome challenges. AI-powered coaches can enhance motivation by offering real-time progress tracking, gamification elements such as points and badges, and personalized encouragement. These features help learners visualize their achievements and set goals, which are essential for maintaining a sense of progress and accomplishment. By integrating motivational elements, AI-powered coaches can create a learning environment that fosters intrinsic motivation and inspires learners to improve their own satisfaction and growth. Also, because you can personalize them, AI tools can adapt motivational strategies to fit individual learner preferences, keeping the learner motivated on their own terms.

4. **How can AI-powered coaches support accessibility and inclusivity in learning environments, and what are some design considerations to achieve this?**

AI-powered coaches can offer several ways to interface with learners including text, voice, and visual interactions. They can support learners with disabilities by integrating with assistive technologies like screen readers or speech-to-text tools. Additionally, AI-powered coaches can adjust the complexity and presentation of content to match diverse learning needs. The ability to provide customized support makes AI-powered coaching an inclusive option for learners with different backgrounds, abilities, and learning preferences. When designing AI-powered learning experiences, instructional designers must prioritize accessibility features from the start. This includes adhering to standards such as the Web Content Accessibility Guidelines (WCAG) and conducting usability testing with diverse user groups.

5. **What are the potential challenges of implementing AI-powered coaches in organizational training programs, and how can instructional designers address them?**
   Ensure the technology is easy to use and intuitive to the leaner. Complex interfaces or poorly designed onboarding processes can lead to cognitive overload and reduce the effectiveness of the learning experience. Providing clear instructions, interactive tutorials, and ongoing support can help learners feel comfortable and confident when using AI coaches. Another challenge is addressing data privacy and ethical considerations. AI tools collect and analyze a significant amount of personal data to personalize the learning experience, so organizations must comply with data protection regulations and maintain transparency about how data is used. Additionally, AI algorithms need to be regularly evaluated to prevent biases that could lead to unfair or inappropriate guidance.

6. **What design principles should instructional designers consider when creating an AI-powered coaching experience to help learners better interact with the AI coach?**
   First, ensure that the user interface is simple as possible by limiting unnecessary features and focusing on core functionalities. Design the tool with consistent layouts, clear visual cues, and minimum extraneous clutter on the screen. Also, consider including an onboarding tutorial that guides learners through the AI-powered coach's functionalities. Provide clear instructions, an interactive walkthrough, and step-by-step guidance to help learners familiarize themselves with the AI tool to prevent them from feeling overwhelmed.

7. **How can AI-powered coaching tools effectively support both hard and soft skills development in learners?**
   For hard or technical skills, AI-powered coaches can provide step-by-step guidance and real-time feedback on technical tasks. This helps learners practice procedural tasks safely and with confidence. For soft skills such as communication or leadership, AI-powered coaches can simulate real-world scenarios through role-playing exercises and branching dialogues. Learners can practice communication, leadership, negotiation, and decision making in a risk-free environment. The AI tool can analyze responses, provide constructive feedback, and suggest alternative approaches to improve interpersonal interactions.

8. **How can AI-powered coaches facilitate self-reflection?**
   AI-powered coaches can facilitate self-reflection by prompting learners with thoughtful questions and guiding them through reflective exercises. AI tools can encourage reflection by providing structured activities, such as journaling prompts or scenario-based questions, that encourage learners to analyze their experiences and identify areas for improvement. The AI-powered coach can track progress over time, allowing learners to see how their responses and self-perceptions evolve, reinforcing a sense of growth and development.

9. **What are some practical applications of AI-powered coaching in workplace training?**
   Some applications include onboarding new employees, working on leadership skills, improving sales skills, and providing technical support. For example, an AI-powered coach could guide new hires through company policies and procedures. In sales training, AI tools could simulate customer interactions, helping sales representatives practice responses in a safe environment

10. **How can organizations measure the effectiveness of AI-powered coaching?**
    Organizations can track metrics such as learner engagement, knowledge retention, and performance improvement. Surveys and feedback tools can assess learner satisfaction and the perceived value of the coaching experience. Additionally, comparing performance metrics before and after implementing AI-powered coaching can provide concrete data on its impact.

Five-Question Quiz With Answers

1. **What is a key benefit of AI-powered coaching in a learning environment?**
   A. It replaces the need for all human interaction.
   B. It provides personalized, real-time feedback.
   C. It only supports theoretical learning.
   D. It primarily focuses on entertainment rather than education.

   Answer: B. It provides personalized, real-time feedback.

2. **Which principle aligns with the AI-powered coach's ability to challenge learners just beyond their current skill level?**
   A. Maslow's hierarchy of needs
   B. Zone of proximal development
   C. Classical conditioning
   D. Operant conditioning

   Answer B. Zone of proximal development

3. **What is a practical application of AI-powered coaching in the workplace?**
   A. Automating all employee communications without context
   B. Offering personalized training modules based on performance data
   C. Removing all human coaching from the learning process
   D. Limiting learning opportunities to annual training sessions

   Answer B. Offering personalized training modules based on performance data

4. **How do AI-powered coaches facilitate self-reflection among learners?**
   A. By only providing objective quizzes and tests
   B. By asking thought-provoking questions and guiding reflection exercises
   C. By avoiding any analysis of learner progress
   D. By focusing solely on memorization-based learning

   Answer: B. By asking thought-provoking questions and guiding reflection exercises

5. **How can AI-powered coaching tools contribute to a manager's effectiveness?**
   A. By automating all managerial responsibilities without oversight
   B. By providing data-driven insights to guide personalized coaching sessions
   C. By removing the need for any human coaching altogether
   D. By limiting the ability to track employee performance

   Answer: B. By providing data-driven insights to guide personalized coaching sessions

Case Study Questions

1. **How did Dormiro leverage AI-powered coaching to address challenges in motivating customer service and sales (CSS) representatives to promote the rewards program?**
   Dormiro used an AI-powered digital coaching platform to provide personalized training and motivation to its CSS representatives. The tool integrated gamification elements like real-time progress tracking, badges, and rewards to encourage reps to meet their loyalty enrollment goals. By offering tailored microlearning modules and interactive simulations, the AI-powered coach helped CSS reps develop the necessary skills to effectively communicate the rewards program's benefits to customers. The AI tool also served as a co-pilot for team leaders, offering a comprehensive view of team performance and highlighting areas needing improvement. This allowed leaders to provide timely and targeted coaching based on real performance data. The use of exception-driven interventions helped managers focus on reps who needed extra support, optimizing coaching efforts and enhancing overall team performance.

2. **What role did data analytics play in the success of Dormiro's AI-powered coaching solution?**
   The AI tool continuously monitored performance metrics, such as sales conversions and loyalty enrollments, and used this data to trigger personalized learning and coaching interventions. This data-driven approach allowed the AI-powered coach to provide targeted recommendations and learning modules tailored to an individual rep's performance gaps, ensuring that training was relevant and meaningful. For managers, the analytics provided insights into team performance through dashboards that highlighted outliers and prioritized coaching opportunities. This allowed managers to move from a reactive to a proactive management strategy, offering support where it was most needed.

Suggested Learner Activities

- Ask students to create their own chatbot. (They can follow the instructions in the "Setting Up an Action First Chatbot" video on my YouTube channel.) Once they've set up their chatbots, ask them to test their chatbot with their peers. (If you have them download the ChatGPT app to their smartphones, they can interact via voice discussions.) Encourage students to explore the chatbot's ability to provide personalized feedback, motivation, and support. After testing, have the student's present their chatbot to the class, demonstrating key features and sharing insights from peer feedback. Facilitate a discussion on the design choices they made, what worked well, and what could be improved when designing a coaching tool.

- Locate an AI chatbot or create your own. Ask students to work in pairs and use the tool to practice soft skills through role-playing scenarios, such as delivering a presentation, negotiating a deal, or managing a difficult conversation. Each pair should take turns interacting with the AI chatbot, focusing on developing effective communication and interpersonal skills. After the students have completed the scenarios, ask them to switch roles and provide feedback to their partners, comparing AI-generated feedback with human observations. Have each pair present a summary of their experience to the class, discussing the effectiveness of the AI chatbot's feedback, what they learned about their soft skills, and how AI-powered coaching can support professional development.

- Ask students to design an AI-powered coach using a paper prototype. Divide students into groups of three to five and ask each group to select a topic for their AI-powered coach, such as goal setting, sales skills, or technical training. Students should incorporate interactive elements, motivational cues, and progress-tracking features into their module design. After they've developed their learning modules, ask each group to present their design to the class. Encourage students to demonstrate key features of their AI-powered coach. Facilitate a class discussion on

instructional design principles for AI-powered coaches, and highlight best practices and creative ideas that emerged.

- Ask students to find case studies involving an AI-powered coach being effective or use the case study from this chapter. Have them work in teams of three to five to analyze the case study, focusing on identifying challenges addressed by AI-powered coaching, specific features of the AI tool that was used, and the outcomes that were achieved. After analyzing the case study, ask each team to present their findings to the class. When they present, ask them to include suggestions for additional strategies that could enhance the AI-powered coaching experience. Conduct a discussion comparing the different approaches suggested by each team.

Key Concepts

- The anytime, anywhere access to an AI-powered coach is a huge advantage. There's no need to coordinate schedules because the coach can help an employee whenever assistance is required; it is learner-centric.

- An AI-powered coach is a terrific option for personalized learning and deliberate practice because it can offer learning experiences adapted to an individual employee's preferences, pace, and needs.

- An AI-powered coach can help with employee engagement and motivation, including support, nudges, and advice to help learners achieve their goals.

- AI-powered coaches can simultaneously coach a large number of employees across an entire organization, which is particularly beneficial for large or geographically dispersed teams. Unlike human coaches, AI-powered coaches don't get tired or distracted, ensuring a consistent level of training across an organization for all employees.

- AI-powered coaches should be designed to eliminate bias and harmful outcomes. AI is susceptible to human bias that can be unknowingly (or knowingly) programmed into algorithms and feedback mechanisms.

- An AI-powered coach's ability to identify outliers and automatically send messages, nudges, and reminders makes it an ideal tool for managers who want help dealing with large teams effectively.

- AI-powered coaches can teach soft and technical skills well, so they can be deployed in a broad variety of industries for many purposes.

Learning Objectives

At the end of this chapter, learners will be able to:

- Describe elements they can add to an AI-powered coach to make it more effective for learning.
- Identify types of learning outcomes that best leverage an AI-powered coach.
- Apply basic design principles when designing an AI-powered coaching experience.
- List examples of AI-powered coaching for improving employee performance.

EXPLANATION OF THE ACTION-FIRST ACTIVITY

This exercise emphasizes the action-first approach to learning by having students interact with a chatbot. By interacting with and evaluating chatbots, students gain hands-on experience that enhances understanding and helps them see the elements of a basic AI-powered coach. By trying to stump the chatbot, students see the possibilities and limits of what can be achieved with a chatbot.

The exercise helps students apply what they learn in this chapter. Incorporating voice interactions through the ChatGPT app shows students even more capabilities of chatbots and AI-powered coaches.

11

Action-First for Everyone

Improve Learning Experiences Through Accessibility

Ask students to participate in an empathy mapping activity in which they explore a learning experience from the perspective of a learner with specific accessibility needs. Provide each student with a unique learner persona, such as someone with low vision, a hearing impairment, dyslexia, or limited mobility. Then, ask them to review a sample learning activity (such as a digital module, job aid, or workshop outline) and identify potential barriers that might prevent their persona from fully engaging with or succeeding in the experience. Ask students to list specific challenges their persona might face and suggest practical adjustments or design changes that would enhance accessibility. *(Find the explanation at the end of the chapter.)*

Instructor's Overview

This chapter offers instructional designers some practical strategies for creating accessible action-first learning experiences. It emphasizes the importance of empathy, thoughtful design, and inclusivity in crafting learning experiences that accommodate diverse learner needs.

This chapter also provides examples and information about when you should consider accessibility in the action-first design process, emphasizing that accessibility should not be an afterthought but, instead, an integral part of each design phase. From the initial stages of empathizing with learners and defining potential barriers to ideation, prototyping, and testing, accessibility considerations should play a critical role.

In addition, this chapter highlights key actions—such as creating learner personas, identifying interaction methods, and selecting technology platforms—when incorporating accessibility can significantly affect the learner experience. It also stresses the importance of early testing with individuals with disabilities to uncover and address potential barriers before final implementation.

Reflection Questions

1. Think about a recent learning experience you designed or participated in. What potential accessibility barriers existed, and how could they have been addressed?

2. Reflect upon how considering accessibility from the start of the design process might change your approach creating learning experiences.

Discussion Questions

1. **Why is it important to consider accessibility from the very beginning of the action-first design process?**
   Accessibility should be integrated into every phase of the action-first design process, from empathy to iteration, to ensure that learning experiences are inclusive from the start. Early consideration allows instructional designers to identify potential barriers and implement solutions proactively rather than reactively. This approach not only meets legal and ethical standards but also enhances the learning experience for all participants, promoting equity and engagement.

2. **How can instructional designers use empathy during the design process to improve accessibility?**
   Empathy involves understanding and anticipating the diverse needs of learners, including those with disabilities. Instructional designers can create learner personas that reflect a range of accessibility needs, considering both permanent and temporary disabilities. Empathizing helps designers identify potential barriers early and develop creative solutions that ensure all learners can fully participate and engage with the learning content.

3. **How can an accessibility audit of an existing learning module help instructional designers improve their practice?**
   An accessibility audit allows instructional designers to evaluate existing materials against established accessibility standards, such as the WCAG. By systematically identifying barriers—such as unclear navigation, lack of alternative text for images, or poor color contrast—designers gain insights into practical adjustments needed to make learning experiences more inclusive. This practice promotes continuous improvement and helps designers adopt a proactive approach to accessibility.

4. **How does involving individuals with disabilities in the testing phase contribute to the design of accessible learning experiences?**
   Involving individuals with disabilities in testing offers insights into real-world usability and potential barriers that might not be evident to designers. Testers can highlight specific challenges, such as difficulty navigating with a screen reader or issues with alternative

input methods. Their feedback helps instructional designers refine their products, ensuring that accessibility features are practical, effective, and genuinely enhance the learning experience.

5. **How might a transparent approach to acknowledging the limitations of accessibility in a learning experience build trust with learners?**
   A transparent approach involves openly communicating any known accessibility limitations within a learning experience and inviting learners to share their needs. By providing clear information about available accommodations and offering support for individual requirements, instructional designers and organizations demonstrate empathy and a commitment to inclusivity. This honesty fosters trust, encourages learners to seek help when needed, and contributes to a positive and supportive learning environment.

6. **What are some universal design principles that support accessibility in learning environments, and how can instructional designers apply them?**
   Universal design principles include providing multiple ways of accessing information (such as visual, auditory, and tactile methods), ensuring consistent and simple navigation, and offering flexible learning paths. Instructional designers can apply these principles by incorporating high-contrast visuals, using clear and concise language, offering adjustable time constraints, and creating alternative formats for learning materials. These strategies help accommodate a wide range of learners, promoting inclusivity and engagement.

7. **What are some common barriers to accessibility in digital learning environments, and how can instructional designers address them?**
   Common barriers include screen reader incompatibility, poor color contrast, reliance on mouse-only navigation, and multimedia without captions or transcripts. Instructional designers can address these barriers by incorporating keyboard navigability, offering high-contrast design options, providing alternative text for images, and ensuring all multimedia elements have accompanying captions or audio descriptions. By considering these elements during the design phase, designers can create a more inclusive learning experience for all participants.

8. **How can instructional designers ensure that multimedia elements in e-learning modules are accessible to all learners?**
   To make multimedia elements accessible, designers should include closed captions for videos, transcripts for audio content, and audio descriptions for critical visual information. Providing controls to adjust playback speed, volume, and screen size can also enhance accessibility. Additionally, avoiding autoplaying media and allowing learners to manually start multimedia components gives them control over their learning experience and reduces potential sensory overload.

9. **What are the benefits of using personas with diverse accessibility needs during the design phase of a learning experience?**
   Using personas with diverse accessibility needs helps instructional designers anticipate and plan for a wide range of learner challenges. By considering scenarios involving visual, auditory, cognitive, and physical disabilities, designers can identify potential barriers early in the design process. This practice encourages empathy, promotes the development of inclusive solutions, and ultimately results in learning experiences that are more adaptable and effective for all participants.

10. **What are the trade-offs between striving for highly accessible learning experiences and managing time and budget constraints, and how can instructional designers find a balanced approach?**
    Creating highly accessible learning experiences is an ideal goal, but it can be challenging to balance this aspiration with limited time and budget resources. The tradeoffs often involve prioritizing certain accessibility features over others, deciding which accommodations provide the most significant impact, and recognizing when alternative solutions may be necessary. For example, while adding closed captions to videos is a cost-effective accessibility measure, developing custom assistive technology features could require substantial investment and development time.

Five-Question Quiz With Answers

1. **Which of the following is an example of providing physical accessibility in a digital learning module?**
   A. Using complex animations without alternative descriptions
   B. Including keyboard navigation options
   C. Displaying text in small, decorative fonts
   D. Requiring all interactions through a touchscreen only

   Answer: B. Including keyboard navigation options

2. **What key principle should instructional designers apply when creating learner personas for accessibility?**
   A. Focus only on permanent disabilities.
   B. Consider a range of disabilities, including temporary and situational.
   C. Avoid discussing disabilities to prevent bias.
   D. Only include personas of typical learners.

   Answer: B. Consider a range of disabilities, including temporary and situational.

3. **Why is empathy an important part of the action-first design process?**
   A. It allows designers to focus solely on compliance.
   B. It helps designers anticipate barriers learners may face.
   C. It encourages designers to create only advanced technology features.
   D. It ensures all content is only visually appealing.

   Answer: B. It helps designers anticipate barriers learners may face.

4. **What is an example of a multimodal element that enhances accessibility?**
   A. Text-only instructions
   B. Providing both audio and visual cues for key information
   C. Using flashing lights as the sole indicator of progress
   D. Limiting the learning experience to a single sense

   Answer: B. Providing both audio and visual cues for key information

5. **How can instructional designers test the accessibility of a digital learning module?**
   A. By only using traditional mouse and keyboard input
   B. By testing the module with assistive technologies like screen readers
   C. By ignoring feedback from learners with disabilities
   D. By focusing only on visual design elements

   Answer: B. By testing the module with assistive technologies like screen readers

Case Study Questions

1. **What lessons can instructional designers learn from EQtech's response to its accessibility issue?**
   This example underscores the importance of incorporating accessibility into the design process from the outset rather than retrofitting solutions after barriers are identified. By proactively considering a range of disabilities, instructional designers can avoid exclusionary practices and create more robust and adaptable learning experiences. This approach aligns with universal design principles, which advocate for flexibility and inclusivity in educational environments. EQtech's case also highlights the value of gathering and acting on learner feedback.

2. **What were the key accessibility barriers present in EQtech's original virtual escape room onboarding experience?**
   In EQtech's original onboarding experience, the primary accessibility barriers revolved around physical and technological limitations. The virtual escape room required all participants to interact exclusively with a mouse and keyboard, with many tasks necessitating

rapid, precise movements such as double-clicking. For Renly, who had a temporary disability due to a broken wrist, these input methods were not feasible, so they couldn't complete their essential onboarding activities. Additionally, the lack of alternative input modalities, such as keyboard shortcuts, voice commands, or touchscreen options, further exacerbated the accessibility challenges.

Suggested Learner Activities

- Ask students to analyze a case study (such as the EQtech onboarding scenario from this chapter) to identify specific accessibility barriers present in the learning experience. Start by forming groups of three or four, and ask each to propose a concrete solution that could improve accessibility and enhance inclusivity. Have them present their ideas to the class for feedback; then, as a group, ask students to determine what steps could be taken to improve the accessibility of the learning presented within the case study. Create a list of best practices that can be recorded and shared with the entire class.

- Ask students to conduct an accessibility audit of an existing learning module or digital resource. Provide students with access to a real or sample learning resource, such as an e-learning module, online training course, or digital job aid. Equip them with an accessibility audit checklist based on established standards like the WCAG or other relevant frameworks. To begin, ask students to explore the resource as if they were a typical learner, noting any initial impressions about usability and accessibility. Once familiar with the content, students should conduct a systematic audit using the provided checklist, marking areas that meet accessibility criteria and those that present barriers. After completing the audit, students should compile a list of recommended modifications to improve accessibility. Facilitate a group discussion on how these changes could enhance the learning experience for all users, not just those with disabilities.

- Ask students to complete an e-learning module using a screen reader. Provide them with access to a standard e-learning module and ask them to turn off their screens or cover them, relying solely on the screen reader to navigate and complete the module. Before beginning, offer a brief introduction about screen readers, including how they work, common keyboard shortcuts, and strategies for interpreting auditory information. During the screen reading activity, students should take notes on their experiences, focusing on challenges such as unclear audio cues, poor navigation flow, inaccessible buttons or links, and instances when visual information is not adequately described. After completing the module, facilitate a reflection session for students to share their observations and discuss how design choices affected their ability to engage with the content.

- Ask students to design a prototype of a learning activity with accessibility in mind. Let them select a specific learning modality (such as a board game, digital module, or live event) and challenge them to incorporate a wide range of accessibility features into their prototype. Encourage them to consider diverse learner needs, including visual, auditory, cognitive, and physical accessibility. For a digital module, they might integrate screen reader compatibility, provide audio descriptions, and offer keyboard navigation options. For a live event, students could plan for sign language interpretation, create visual aids with clear and simple graphics, and build in alternative participation methods, such as voice or text-based interactions. The goal is for students to design an inclusive learning experience that ensures equitable access for all participants. Once they've developed their prototypes, you can facilitate a playtesting session for them to engage with the learning activities and provide targeted feedback on accessibility aspects.

Key Concepts

- Empathy is a driver of good, learner-centric design.
- Whenever possible, include people with disabilities and those who use assistive technology in a digital environment to test and provide feedback on your designs. They may uncover new barriers and elements with unintended outcomes.
- Your learning experiences will not always be fully accessible, but when you consider and design for accessibility, you expand the reach, playability, and inclusivity of your designs.
- Disclose any inaccessibility in your learning experience. This transparency helps promote trust, build a positive reputation, encourage collaboration and problem solving, and reassure learners that accommodations and alternative access to crucial information are available if needed.

Learning Objectives

At the end of this chapter, learners will be able to:

- Explain when they should consider accessibility in the action-first design process.
- Identify accessibility barriers that can exist for learners in an action-first experience.
- Describe accessibility considerations that can help break down barriers.

EXPLANATION OF THE ACTION-FIRST ACTIVITY

This action-first activity fosters a deeper understanding of learners' diverse needs and the role accessibility plays in creating inclusive learning experiences. By stepping into the shoes of learners with specific disabilities or challenges, instructional designers develop empathy and gain practical insights into potential barriers within their designs. The awareness garnered from this activity can help shift accessibility from a compliance-driven task to a core design principle. The goal of this exercise is to help instructional designers build more thoughtful, effective, and equitable learning solutions that enhance engagement, retention, and satisfaction for all learners.

12

What's Next?

Design Your Action-First Learning Project

Because this is the last chapter, ask the students to take 10 minutes to consider the entire *Action-First Learning* book and reflect on lessons learned, insights, and ideas that have resonated with them. Ask learners to write down five to 10 of their reflections, and then ask them to form small groups to share their recorded insights. Finally, bring the larger group back together and have each small group share one standout idea or strategy they discussed. *(Find the explanation at the end of the chapter.)*

Instructor's Overview

This final chapter emphasizes the urgency of implementing action-first learning. It encourages designers not to wait for permission but to take proactive steps toward change. It provides practical strategies for advocating for action-first projects within organizations, addressing resistance, and building a coalition of supporters. This chapter also offers ideas to overcome resistance, such as preparing concise answers for skeptics, proposing small-scale pilot programs, and leveraging internal champions

A portion of this chapter is dedicated to practical tools and resources, including worksheets and templates, to help designers map out their projects from start to finish. It also provides a detailed comparison of nine action-first learning techniques, highlighting the strengths, learning opportunities, and key design considerations for each method. In addition, this chapter covers the importance of planning for learner reflection and conducting pilot tests to gather feedback and refine the learning experience.

Reflection Questions

1. Reflect on a past learning experience that you felt fully engaged and immersed in. What elements contributed to this level of engagement, and how might those elements align with action-first learning principles?

2. Reflect on a situation in your organization when traditional training methods did not achieve the desired outcomes. How could an action-first learning approach have made a difference, and what specific strategies might you apply if given the opportunity to redesign that experience?

Discussion Questions

1. **Why is it important to consider accessibility from the very beginning of the action-first design process?**
   Accessibility should be integrated into every phase of the action-first design process, from empathy to iteration, to ensure that learning experiences are inclusive from the start. Early consideration allows instructional designers to identify potential barriers and implement solutions proactively rather than reactively. This approach not only meets legal and ethical standards but also enhances the learning experience for all participants, promoting equity and engagement.

2. **Why is it beneficial to conduct a small-scale pilot implementation of an action-first learning project?**
   A pilot program allows instructional designers to test the action-first approach in a controlled setting, gather valuable feedback, and make necessary adjustments before a full-scale rollout. It provides tangible evidence of the method's effectiveness and can help address stakeholders' concerns.

3. **What are some strategies for overcoming resistance to action-first learning within an organization?**
   One strategy to overcome resistance is to build a coalition of internal champions who understand and support the value of action-first learning. These champions can include like-minded peers, managers, and influential stakeholders who see the potential benefits of shifting from traditional learning methods to a more active, hands-on approach. By collaborating with these advocates, instructional designers can amplify their message, generate excitement, and create a groundswell of support that can influence decision makers. An effective tactic could be establishing an informal book club or discussion group for team members to explore action-first learning concepts together, fostering a shared understanding and laying the groundwork for change.

4. **What is the primary objective of an action-first learning project, and why is it considered essential in dynamic environments?**
   The objective of an action-first learning project is to engage learners in meaningful practice and application of knowledge. This approach is effective because it helps learners develop critical skills such as adaptability, critical thinking, and problem solving—which are all vital for responding to real-world challenges occurring within organizations.

5. **How does considering mechanics affect the selection of an action-first learning design?**
   First, the mechanics should align with learning goals of the activity. Each action-first method offers unique mechanics that can drive engagement and reinforce learning objectives but in different ways. For example, card games use simple rules, real-time application, and familiar gameplay to teach memorization, categorization, and critical thinking. In contrast, board games leverage systems thinking and the related mechanics to tradeoffs through randomized board layouts, cooperative play, and resource management. Other mechanics are used with different action-first learning methods, so choosing the right method to align with the right learning outcomes is important.

6. **How can instructional designers plan for effective learner reflection in an action-first project?**
   Structured reflection opportunities could include debriefing sessions, journaling, guided reflection prompts, and other activities that encourage learners to connect the experience to real-world applications and to think about the experience they just encountered.

7. **What are some challenges that might arise when implementing action-first learning, and how can instructional designers address them?**
   Challenges include resistance to change, limited resources, and uncertainty about new methods. Addressing these challenges involves clear communication, showcasing success stories from pilot programs, and adapting approaches to fit within existing organizational cultures and constraints.

8. **What steps should a learning designer take to transform a traditional learning approach into an action-first experience?**
   Choose a specific method, apply the action-first learning framework, and align with desired learning goals. Leverage the provided worksheets and then run a pilot test. After the pilot test, gather feedback and refine the experience before full implementation to ensure success, and then share that success throughout the organization.

9. **How can learning designers balance complexity and simplicity when creating an action-first learning experience?**
   Balancing complexity and simplicity involves aligning the difficulty level with the learners' experience and the learning objectives, as well as providing various levels of difficulty within the action-first learning experience. Avoid overwhelming learners with overly complex rules or scenarios and make sure that the experience feels challenging but achievable. Iterative testing through pilot programs can help strike the right balance, ensuring the experience is both engaging and effective.

10. **What role does "fun" play in action-first learning?**
    Fun can be a catalyst for engagement, motivation, and retention because, when learners are enjoying themselves, they are more likely to fully immerse themselves in the experience, which enhances active participation and reduces resistance to learning. A sense of playfulness not only makes learning more enjoyable but also lowers anxiety, creating a safe space for learners to make mistakes and learn from them without the fear of real-world consequences. Additionally, fun contributes to deeper learning by triggering a positive emotional response. Neuroscience research suggests that positive emotions can enhance cognitive processes, including attention, memory, and problem solving.

Five-Question Quiz With Answers

1. **Why is learner reflection important in action-first learning experiences?**
   A. It helps reinforce the connection between the experience and real-world applications.
   B. It is optional and does not affect learning outcomes.
   C. It should focus only on negative aspects of the experience.
   D. It primarily serves as a way to fill extra time in the learning session.

   Answer: A. It helps reinforce the connection between the experience and real-world applications.

2. **Which approach is recommended for addressing skeptics of action-first learning?**
   A. Provide vague explanations without evidence.
   B. Prepare specific, research-based answers to their concerns.
   C. Avoid conversations with skeptics altogether.
   D. Focus only on the benefits without acknowledging challenges.

   Answer: B. Prepare specific, research-based answers to their concerns.

3. **What is the primary goal of action-first learning?**
   A. To provide learners with many opportunities for passive information intake.
   B. To engage learners in active participation and application of knowledge.
   C. To emphasize rote memorization over practical skills.
   D. To delay hands-on experience until after theoretical instruction.

   Answer: B. To engage learners in active participation and application of knowledge.

4. **When preparing a pilot test for an action-first learning experience, what is a recommended practice?**
   A. Skipping feedback collection to avoid criticism

B. Testing with as large a group as possible
C. Running a small-scale pilot test to gather data and insights
D. Avoiding any changes to the experience based on pilot feedback

Answer: C. Running a small-scale pilot test to gather data and insights

5. **What should you consider when selecting the appropriate action-first learning method?**
   A. Personal preference of the designer only
   B. Alignment with organizational goals and learning objectives
   C. Choosing the most expensive method available
   D. Avoiding learner input in the selection process

   Answer: B. Alignment with organizational goals and learning objectives

Suggested Learner Activities

Chapter 12, as the culminating chapter, provides the opportunity for learners to create an action-first learning experience. This should be the primary activity for this chapter. The worksheets in *Action-First Learning* can be used both to develop an action-first learning activity and evaluate activities.

Create groups of three to four students and explain that they will be designing their own action-first learning experience. Emphasize that this is a hands-on opportunity to apply what they have learned and that creativity and experimentation are encouraged. Inform students that they can select any method from the book as their action-first learning technique, such as card games, board games, escape rooms, branching scenarios, or augmented and virtual reality.

After they have selected a method, have them map out their experience using Tool 12-2 (Action-First Learning Plan Worksheet). They should define the business need, desired learning outcomes, rationale for their chosen method, key mechanics, required resources, and plans for learner reflection. If possible, have them create a prototype and share it with the entire class. Ask them to reflect on the process and develop ideas for potential improvements for real-world implementation.

Finally, have students use Tool 12-3 (Learner Feedback Worksheet) to review their peer's action-first learning activities.

Key Concepts

- Action-first learning is not just a design preference but a necessity for preparing learners to thrive in dynamic environments. Learning designers must take initiative without waiting for approval to advocate for action-first projects and drive change within their organizations.
- When proposing action-first learning as a solution, expect resistance, particularly in organizations in which traditional training methods are deeply entrenched. Building a coalition of internal champions and preparing concise, research-backed responses for skeptics can help overcome this resistance.
- Before a full-scale implementation, running a small pilot program can demonstrate the effectiveness of action-first learning. Pilot tests provide valuable data, offer insights for improvement, and help build a strong case for broader adoption.
- There are numerous action-first learning techniques, including card games, board games, escape rooms, branching scenarios, and augmented or virtual reality experiences. Selecting the appropriate technique involves considering organizational goals, learning objectives, and the specific skills to be developed.
- A critical component of action-first learning is the reflection process. Structured debriefing helps learners connect their experiences with real-world applications, reinforcing learning outcomes and ensuring that insights gained translate into practical skills and behaviors.

Learning Objectives

At the end of this chapter, learners will be able to:

- Plan an action-first learning project.
- Implement an action-first learning project.
- Explain how to debrief learners who have taken part in an action-first learning project.
- Strategize how to overcome resistance to action-first learning in their organization.

EXPLANATION OF THE ACTION-FIRST ACTIVITY

This reflection activity helps learners recall lessons learned, insights gained, and the most effective ideas discovered in *Action-First Learning*. It also provides an opportunity for sharing so

learners can learn from one another. This action-first activity not only helps individual learners process what they have read and learned from this book but also builds a shared understanding among participants, ensuring that learners leave with a well-rounded grasp of the concepts and applications of action-first learning.