

## **Engaging Interactions For eLearning**

25 Ways to Keep Learners Awake and Intrigued

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## Summary

Training can sometimes be extremely boring. eLearning can be even worse, because learners are often working on their own - without an instructor or peers to help keep them involved (awake). This eBook was written to shake up the typical “page turner” eLearning course and introduce several ideas for creating more enjoyable and effective learning experiences.

The interactions presented in this eBook are designed to be used within eLearning courses or in any other training scenarios where you see fit. The interactions are designed to wake up learners and get their brains into gear. We want them to be **interested, inquisitive, challenged**, and **engaged**. We want to throw puzzles and problems at them, and push them to stretch their brains. Who knows – they may even enjoy themselves along the way!

## Online Resources

A blog has been set up for this eBook (<http://www.EngagingInteractions.com>), where interactions and ideas can be discussed and examples can be shared. Your input is appreciated!

## About the Author

B.J. Schone is an eLearning Specialist in Kansas City where he designs and builds online courses and administers a Learning Management System for a mid-sized company. B.J. earned his Bachelor of Arts in Computer Science and his Master’s of Education in Information Science & Learning Technologies (MEd) from the University of Missouri-Columbia. He is also the author of *eLearning Weekly* (<http://www.eLearningWeekly.com>) and co-creator of *eLearningPulse* (<http://www.eLearningPulse.com>).

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## Revisions

September 2007 – Initial release

## **What We'll Cover**

The beginning of this eBook sets the stage for designing and developing eLearning interactions. Recommendations are made regarding the use of development tools and technologies, a few terms are defined, and then the reasoning behind using engaging interactions in eLearning is explained. Finally, the different levels of interaction and knowledge types are explained, and then the interactions are presented one-by-one.

## **Do Your Homework**

Before using these interactions, make sure that eLearning is the best solution for your situation. These interactions, much like any type of instruction, require a proper setting and proper context. You should also pay special attention to your audience and design the interactions for their needs and learning preferences. If you do your homework, you will have a much higher likelihood of being successful.

## **Development Tools and Technologies**

The ideas and interactions in this eBook are presented as concepts; they can be implemented several ways using various tools and technologies. It is important to understand that you do not need expensive or complicated tools to develop effective interactions for eLearning. Be creative and use the resources you already have. You may also consider free development tools that are available on the web<sup>1</sup>. Remember that the main idea is to engage the learner's brain more than anything else. You do not necessarily have to use flashy special effects and eye candy; you can often do the trick with basic tools, storytelling, creativity, and a bit of imagination.

When creating your interactions, focus most on designing the experience and the instruction, rather than focusing on the technologies involved. If you design something correctly from the beginning, it can be built many different ways and still be successful. If you design something incorrectly, it will likely fail no matter how you build it.

## What Makes an Experience Engaging?

An experience is likely to be engaging for an individual if one or more of the following are true:

- They face some type of challenge.
- They must make decisions.
- They are allowed to explore.
- They are allowed to make mistakes without being disciplined.
- They have fun.

These are just a few examples; others may be relevant as well. For more information about making experiences engaging, read *Engaging Learning* by Clark Quinn<sup>2</sup>.

## What is an Interaction?

An interaction, in the context of this eBook, is a learning activity where an individual is presented with a problem or scenario and must work to achieve a goal.

Interactions should not be gimmicky or without purpose, and they should be designed to maintain the learner's interest.

Many of the interactions in this eBook focus mainly on cognitive skills; for example, can the learner solve a problem using their knowledge and skills? Other interactions bring in emotional elements to further engage the learner; for example, we may place the learner in a pseudo-real-world scenario where their decisions have an impact on themselves and/or their co-workers. Choose your approach based on the material being taught, the context, and your knowledge of your audience.

## Why are Engaging Interactions a Necessary Part of eLearning?

Too many eLearning courses are "page turners," where the learner simply reads through pages of bland text. Engaging interactions are necessary because they are more likely to keep learners interested and mentally stimulated during a learning experience. It is ideal if the learner can mimic the real-world task in the interaction; however, this is not always possible. But if learners are able to apply their knowledge in some other (similar) way, it will help them process the information more in-depth

and they will have a higher likelihood of recalling the information and transferring it to a real-world setting.

On a lighter note, it never hurts to make the experience fun (where applicable, of course). Focus on the instruction first and foremost, but consider making the interactions as intriguing and enjoyable as possible.

## How Often Should I Use Interactions?

As a general guideline, use interactions every few minutes or every few pages in an eLearning course. However, it is important to use interactions only when and where they are beneficial to the learning experience. If an interaction does not fit well, do not include it.

## Levels of Interaction

This section is taken from the white paper *"eLearning: From Level I to Level IV of Interactivity: Why choosing the appropriate interactivity level is important,"* by Mark Lange at Entelisis Technologies<sup>3</sup>. It defines the levels of interaction and provides example elements found in each level. It is important to be familiar with these levels; this knowledge can help you better select (and design) interactions based on the type of knowledge you are attempting to teach.

The U.S. Department of Defense (DOD) developed definitions for four major levels of eLearning interactivity that can be found in the "Department of Defense Handbook: Development of Interactive Multimedia Instruction (IMI)." The DOD defined these interactivity levels to correspond with various levels of learning (fact, rule, procedure, discrimination, and problem solving), as well as identified the resulting skills expected at the end of the training session. They also use the various levels to assign applicable costs to training initiatives. These levels of interactivity provide a basic set of standards to help define the appropriate level for eLearning systems. Each level is indicated by certain core criteria including nature of content, job descriptions, technology infrastructures and even budget constraints.

### Level I: Passive

In this level, the learner acts merely as a receiver of information. The learner may read text on the screen as well as view graphics, illustrations and charts. The learner

may interact simply by using navigational buttons to move forward or back through the program.

Passive eLearning systems represent the majority of online learning being used today. They are still appropriate when the session needs to distribute information quickly. Examples might be new human resource policies and explanations of changes in corporate structure, information that does not directly affect the manner in which the employee must do their job on a day-to-day basis.

## **Level II: Limited Interaction**

In this second level, the learner makes simple responses to instructional cues. As in Level I, there may be multiple choice exercises, pop-ups, rollovers or simple animations. Level II adds a component of scenario-based multiple choice and column matching related to the text and graphic presentation. Certain application simulations may exist that do not require the learner to enter field data, but merely follow a process or procedure. There may also be some interactive animations where the learner has the ability to investigate.

## **Level III: Complex Interaction**

Here, the learner makes multiple, varied responses to cues. In addition to the types of responses in Level II, complex interactions may require text entry boxes and manipulation of graphic objects to test the assessment of the information presented. Techniques for engagement in a complex interaction include complex simulations where the learner must enter actual data into fields and experience consequence for errors and faulty data. In addition, scenario-based branching logic is introduced. When using branching logic, learners experience some kind of jeopardy for incorrect responses, and their progress is determined by their decisions.

## **Level IV: Real-time Interaction**

Real-time interaction creates a training session that involves a life-like set of complex cues and responses in this last level. The learner is engaged in a simulation that exactly mirrors the work situation. Stimuli and response are coordinated to the actual environment. Real-time learning and assessment occurs, and the session is most likely held in a collaborative environment with other learners and a facilitator.

## Knowledge Types

It is critical to understand the *knowledge type* of the material you are attempting to teach to the learner; it will enable you to design the most effective instruction and interaction. For example, if your goal is to have the learner memorize the capitals of the 50 United States (factual knowledge), rote memorization along with drill/practice exercises would be effective. However, if you are teaching the learner how to diagnose a malfunctioning diesel engine (procedural knowledge), it may be best to utilize scenarios that build troubleshooting skills and demonstrate cause-and-effect relationships. Familiarity with these knowledge types and their most appropriate learning interactions comes with time and experience.

The knowledge types listed below are based on Andersen and Krathwohl's taxonomy of the cognitive domain<sup>4</sup>. They are described as follows:

- **Factual Knowledge** refers to essential facts, terminology, details or elements students must know or be familiar with in order to understand a discipline or solve a problem in it.
  - **Example:** Knowing that Shakespeare wrote *Romeo and Juliet*
- **Conceptual Knowledge** is knowledge of classifications, principles, generalizations, theories, models, or structures pertinent to a particular disciplinary area.
  - **Example:** Understanding how library books are organized
- **Procedural Knowledge** refers to information or knowledge that helps students to do something specific to a discipline, subject, area of study. It also refers to methods of inquiry, very specific or finite skills, algorithms, techniques, and particular methodologies.
  - **Example:** Understanding how to wrap a gift
- **Metacognitive Knowledge** is the awareness of one's own cognition and particular cognitive processes. It is strategic or reflective knowledge about how to go about solving problems, cognitive tasks, to include contextual and conditional knowledge and knowledge of self.
  - **Example:** Being aware that you study better in an environment with soft music playing



## 25 Engaging Interactions For eLearning

The interactions displayed below are arranged in order of increasing interactivity. Each interaction contains a description, an example, the level(s) of interaction that can be achieved, and the most appropriate type(s) of knowledge to be learned using the interaction.

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### 1. Scattered Steps

**Description:**

Display the steps of a process or procedure scattered throughout the page. Have the learner put the steps in the correct order. Instruct the learner to click on a *Check My Answer* button once they are finished.

If the learner does not order the steps correctly, show the process breaking, stopping, not working, etc., as a result of their actions. Describe why the order is incorrect (ex. the valve did not release the correct amount of pressure).

You may consider having the pieces snap together like a puzzle so that the learner sees when a correct connection is made.

**Example:**

Display scattered steps representing a safety procedure:

*What are the steps for correctly addressing a hazardous materials spill? Put the steps in the correct order.*

**Level(s) of Interaction:** 2

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural

---

## 2. Myth or Fact

**Description:**

Present the learner with a series of statements or phrases and have them categorize each as *Myth* or *Fact*.

Provide feedback to prevent misunderstandings, and make sure to reinforce the facts. This interaction can be used to dispel common misconceptions.

**Example:**

Show Myths and Facts about a new cleaning product that is used for cleaning kitchens. Have the learner identify which statements are false (Myth) and which are true (Fact).

**Level(s) of Interaction:** 2

**Knowledge Type(s):**

- Factual

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### 3. Interactive Timelines

**Description:**

Create a timeline of events that a learner can navigate to find out about milestone dates or time periods.

If the learner clicks on a specific date or year, display events and content that apply to that timeframe. Content may include videos from that era, newspaper articles, etc.

The timeline can be as long or as short as you'd like, from days to centuries (depending on your content).

**Example:**

Present a timeline of an organization's history. This is a good way to teach important events and milestone dates to new employees. The employee can re-live the past first-hand by watching video and reading newspaper articles from the selected time period.

**Level(s) of Interaction:** 2

**Knowledge Type(s):**

- Factual
  - Conceptual
-

## 4. Acronyms or Alphabet Fill-Ins

**Description:**

Have the learner come up with descriptive words to complete a phrase (or even the entire alphabet). Provide sample answers after they are finished.

The main idea for this interaction is to get the learner to stretch their brain and try to look for words and concepts related to the theme of the course.

**Example:**

S \_\_\_\_\_  
A \_\_\_\_\_  
F \_\_\_\_\_  
E \_\_\_\_\_  
T \_\_\_\_\_  
Y \_\_\_\_\_

(or)

A \_\_\_\_\_  
B \_\_\_\_\_  
C \_\_\_\_\_  
D \_\_\_\_\_  
E \_\_\_\_\_  
(and so on)

**Level(s) of Interaction:** 2

**Knowledge Type(s):** • Factual

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## 5. Order of Importance

<b>Description:</b>	Have the learner organize information into a hierarchy based on importance, urgency, level of awareness, or whatever criteria fit the situation. This interaction makes sure the learner understands how information fits together and what is most important.
<b>Example:</b>	Have new employees organize the company's structure (ex. divisions, regions, business units, offices, etc.) or product lines (by amount of revenue generated, by popularity, etc.)
<b>Level(s) of Interaction:</b>	2
<b>Knowledge Type(s):</b>	<ul style="list-style-type: none"><li>• Factual</li></ul>

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## 6. Find the Mismatched / Stand-out Item

**Description:** Present the learner with several images of items related to the learning content. Instruct the learner to choose an item or items for a key reason.

**Example:** Consider these scenarios:

*Click the widget(s) that were not manufactured correctly.*

*Click the television model(s) that do not have an LCD screen.*

**Level(s) of Interaction:** 2

**Knowledge Type(s):**

- Factual
- Conceptual

---

## 7. Story-Based Questions

**Description:**

Present a story to the learner (using text, images, and/or video) and allow them to react by selecting from multiple options that may occur in the real-world scenario. Their options should be represented as buttons or links on the screen.

Show descriptive feedback based on the learner's selection. For example, instead of just saying, "Correct," say, "Your manager gives you a huge compliment for choosing to take action instead of ignoring the situation."

For a more immersive experience, describe a scenario where the learner is a character in a story. Give them ownership for their decisions. Encourage them to choose correctly so they can succeed in the story and eventually on-the-job.

**Example:**

Consider this **scenario**:

*You are asked to make a critical purchasing decision at your company based on certain criteria. You'll need to justify this decision to the executives at a board meeting. What steps would you take to reach your decision?*

You could present the learner with several options - with a checkbox next to each option, or provide an open text field for their response.

**Level(s) of Interaction:** 2,3

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural
- Metacognitive

## 8. Simple Game-based Interactions

**Description:**

Game-based interactions use traditional games primarily to test learners' factual knowledge. You can use models of existing games or design your own custom games.

These activities are helpful for teaching and assessing factual information where recall is important, such as sales terms, airport names and abbreviations, entrée ingredients, etc.

**Example:**

Examples include Jeopardy, Hangman, Wheel of Fortune, The Price Is Right, crossword puzzles, word-finds, and the memory matching card game.

**Level(s) of Interaction:** 2,3

**Knowledge Type(s):**

- Factual
- Conceptual

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## 9. Exploring a Complex Process or Procedure

**Description:**

Show a diagram of a process or procedure and instruct the learner to explore the diagram by moving their mouse over the different parts (ex. the different steps of the procedure). Have the different parts of the image spring to life as the learner explores them. Use animation or text to show/describe the inner workings of each section.

You may also consider giving the learner a (virtual) magnifying glass that allows them to zoom in and out.

Allow the learner to explore the entire diagram, but also do a recap at the end to make sure all points are made and that no area was left out.

You may also have the learner explain part of the diagram in their own words, or have them try to predict part of the diagram (using clues) before it is revealed.

**Example:**

Show an image that displays the workings of an assembly line. Show a product being assembled and allow the learner to explore and view information about the different steps.

**Level(s) of Interaction:** 2,3

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural

## 10. A Customer's Perspective

**Description:**

Have the learner work through a problem or situation from a customer's perspective. You may have them interact (virtually) with a customer sales representative who is using a call script, or have them work through the installation of a product using only the documentation provided by the company. This could enlighten the learner to how customers are treated or how the documentation/methods/procedures really work.

**Example:**

Consider this scenario:

*You were overcharged on your latest cable bill. Contact the cable company to resolve this issue.*

Have the learner work through a dialogue with a virtual customer service representative who uses a typical call script. At the end, have the learner explain what went well – and what did not go well.

**Level(s) of Interaction:** 2,3

**Knowledge Type(s):**

- Factual
- Conceptual

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## 11. Incomplete Stories

<b>Description:</b>	Present a MadLib-like game where the learner fills in appropriate words or drags in images to complete a story that has several pieces missing. Allow for some fun, but still make it appropriate for learning – and require them to fill out the story correctly to prove their understanding of the material.
<b>Example:</b>	Tell a story of a person installing a home entertainment system consisting of several complicated components. The learner must complete the story by filling in the blanks with text and by dragging images into the appropriate locations (ex. cables and components). Once finished, the story will explain how the individual installed the home entertainment system and how (technically) they did it.
<b>Level(s) of Interaction:</b>	2,3
<b>Knowledge Type(s):</b>	<ul style="list-style-type: none"><li>• Factual</li><li>• Conceptual</li><li>• Procedural</li><li>• Metacognitive</li></ul>

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## 12. What's Wrong With This Picture?

**Description:**

Show a photo of a workspace relevant to the learner (ex. inside an auto shop, a dentist's office, an assembly line, etc.). Explain that several items in the photo pose a safety risk or are just plain wrong for the setting. Have the learner identify safety hazards or potential problems in the workspace by clicking the area(s) of concern. Display a visual cue to indicate if they are correct or incorrect. You may also have the learner identify why an item is a risk. This interaction may allow for role-play, as well: "You are a safety inspector who must identify problem areas on a construction site."

**Example:**

Consider this scenario:

*As the manager of a restaurant, you must make sure the kitchen is as clean and organized as possible at all times. There are 10 potential problems in the photo of the kitchen below. Click on each potential problem and explain how it could negatively affect your employees, your customers, and your reputation.*

**Level(s) of Interaction:** 2,3

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural

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## 13. Before and After or Old Way vs. New Way

**Description:**

If introducing a new technology, system, or process, show reasons why the new way was chosen. Have the learner sort out information by the old way vs. the new way to make sure they grasp and understand the difference between the two. Justify why things are being changed and how the new way should be better.

Note: Remember that new employees probably did not see the old way, so do not reference it in a way that would require them to learn the old way in order to successfully complete the interaction.

**Example:**

A new cash register is being introduced at a retail establishment. Have the learner explain its advantages and why it is being used. Have the learner work through a series of exercises identifying the Old Way and New Way so that they understand why the change is being made, and how to work with the new system.

**Level(s) of Interaction:** 2,3

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural

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## 14. Teach-back (a.k.a. Train the New Person)

**Description:**

Put the learner in a scenario where they must prepare training for a new member of their team. Have them assemble and organize content by relevance and based on what they have already learned in the course.

For example, provide 20 phrases or pieces of information where only 8 of the pieces are correct. Instruct the learner to select which information they would use to train the new person on their team.

**Example:**

Consider this scenario:

*Your boss has given you the opportunity to grow your sales team to improve the bottom line. How would you train the newest sales associate to help your team achieve this goal? Select the content that is most important.*

**Level(s) of Interaction:** 2,3

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural
- Metacognitive

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## 15. Using an Agent or Character

**Description:**

Use a character (a.k.a. agent) that assists the learner as they progress through an eLearning course. Have the character introduce and discuss content, provide tips and tricks, and periodically stop to ask assessment questions.

Important: Make sure the learner has the ability to show/hide the character (in case it becomes annoying).

Allow the learner to interact with the character by asking it questions (which actually searches a knowledgebase or existing set of questions). Also, if the learner appears to be having issues with an exercise, the character can provide clues.

**Example:**

In a course teaching how to use a new GPS system, use a talking map or compass as a character to introduce content, describe features of the device, and assist with exercises.

**Level(s) of Interaction:** 2,3

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural
- Metacognitive

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## 16. Scavenger Hunt

**Description:**

This is a great interaction for teaching learners how to use new web sites and other information systems. Present the learner with a list of items that they must find - using a web site or information system - to complete this exercise. Have the learner obtain different pieces of information and then come back to plug the values into fields on the page. To do this, they will have to explore this new resource and become familiar with its navigation, search features, etc.

**Example:**

Have the learner try to find nuggets of information on an intranet site. An example question would be, "What department is in charge of determining the pricing of our products?" The learner would research the question and then come back and enter, "Sales and Marketing," or something similar.

**Level(s) of Interaction:** 2,3

**Knowledge Type(s):**

- Factual

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## 17. Read / Watch and Reflect

**Description:** Have the learner read a passage (or watch a video or view a series of images) and then respond to questions using an open text area or other form fields. Have them discuss their opinions of what happened, or reflect on the different outcomes that were possible for the given scenario.

**Example:** Consider this scenario:

*Watch a video of a public speaker or politician. Identify techniques used by the speaker to persuade the listener. Were they effective? Why or why not?*

**Level(s) of Interaction:** 2,3,4

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural
- Metacognitive

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## 18. Fix It!

**Description:**

A problem or crisis evolves and the learner is the only person who can save the day. Have them resolve the problem using the information they just learned in the course. Raise tension and escalate circumstances throughout the interaction. Present feedback based on their actions, whether or not they save the day.

**Example:**

Consider this scenario:

*An emergency erupts at a factory: a machine overheats and causes a major malfunction. What steps do you take to prevent injuries and reduce further equipment damage?*

**Level(s) of Interaction:** 2,3,4

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural
- Metacognitive

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## 19. Did I Do This Correctly?

**Description:**

Have the learner watch a task (either a video or sequence of images) and determine if the task was done correctly. Show both good and bad examples. Ask: "Was the task done correctly? Why or why not?" Have them respond using multiple choice questions or via an open text area.

After the learner responds, identify misconceptions and discuss them so that they clearly understand the correct method. Have a summary at the end, and use plenty of feedback to reinforce the correct way to perform the task.

**Example:**

Show the installation of a faucet, dishwasher, or other appliance. Then ask the learner to identify if it was done correctly. If it wasn't done correctly, have them explain what was incorrect.

**Level(s) of Interaction:** 2,3,4

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural
- Metacognitive

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## 20. Story-based Adventure

<b>Description:</b>	Challenge the learner to work through a storyline, quest, or toward an ultimate goal in an eLearning course. Have them complete a series of tasks, challenges, puzzles, etc., to reach the end and reveal the end of the story. Each exercise in a course could be a step toward achieving the final goal. Add gaming elements to increase the level of engagement, while staying instructionally relevant.
<b>Example:</b>	Use a storyline where the learner tries to reach a castle, save all of the customers in a neighborhood, or prevent an environmental disaster. Let them progress slowly toward their goal by achieving milestones along their journey (for example, allow them the opportunity to save one customer at a time in each exercise, with their overall goal being to save the entire the neighborhood).
<b>Level(s) of Interaction:</b>	2,3,4
<b>Knowledge Type(s):</b>	<ul style="list-style-type: none"><li>• Factual</li><li>• Conceptual</li><li>• Procedural</li><li>• Metacognitive</li></ul>

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## 21. Branching Stories

**Description:**

Branching stories allow the learner to participate in a “Choose Your Own Adventure” scenario. In this type of scenario, the learner reads about a situation and then chooses which way the story will proceed (ex. “Click *here* if you would discuss the issue with your boss. Otherwise, click *here* to ignore the issue.”). A story will consist of several questions that lead the learner to different endings, depending on their decisions. If the learner makes the correct decisions, they will successfully complete the adventure/story. If they do not make the correct decisions, they will not complete it successfully and will see the (negative) results of their actions.

Feedback can be provided after each question or at the end of the scenario, depending on preference.

Read *Learning By Doing*, by Clark Aldrich<sup>5</sup>, for more information on branching stories.

**Example:**

Consider this scenario:

*You are interviewing candidates for a sales position. Ask the candidates questions and respond to their answers in a way that helps you determine if they are qualified for the position.*

Several responses would be available to the learner. The next screen of the story would be based on the answer provided by the learner, and so on.

**Level(s) of Interaction:** 2,3,4

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural
- Metacognitive

## 22. Challenge and Response

**Description:**

Simulate an interview or interrogation scenario where the learner is being questioned by another individual.

A pseudo-real context should be used. The key to this activity is use a scenario that could actually happen (without scaring or intimidating the learner too much!).

**Example:**

Consider this scenario:

*Your boss asks: Why did you fire Bob Jones?  
Do you think this was the right decision?  
Shouldn't you have just coached him through  
the situation?*

**Level(s) of Interaction:** 2,3,4

**Knowledge Type(s):**

- Factual
  - Conceptual
  - Procedural
  - Metacognitive
-

## 23. Interactive Spreadsheets

**Description:**

Interactive spreadsheets are exercises that allow the learner to plug-in figures or information into a system and see the direct results of their actions. Consider using interactive spreadsheets when it is important to show the effects of actions over time, or when you need to emphasize cause-and-effect relationships.

Read *Learning By Doing*, by Clark Aldrich<sup>5</sup>, for more information on interactive spreadsheets.

**Example:**

The classic example of this type of interaction is a lemonade stand:

*You must operate a lemonade stand and determine how and when to spend your money. After making your decisions, you will be able to watch how your lemonade stand performs over (simulated) time.*

Example questions:

*How much will you charge for lemonade? (If you price it too high, people will not buy it. If you price it too low, you will not make money.)*

*Next weekend will be very hot. Do you think you will sell more lemonade than usual? If so, should you buy extra supplies?*

**Level(s) of Interaction:** 3,4

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural
- Metacognitive

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## 24. Virtual Products / Virtual Labs

**Description:**

Virtual products and virtual labs offer the learner a simulated environment where they can safely interact with a product or setting. The learner should be able to attempt different actions and the product's (or environment's) response should mimic real-life as closely as possible. This is a much cheaper way to train learners, especially in scenarios where the real products/environments are expensive or difficult to obtain.

Read *Learning By Doing*, by Clark Aldrich<sup>5</sup>, for more information on virtual products and virtual labs.

**Example:**

Consider:

- A chemistry lab where you can test chemical reactions without worrying about injuries, explosions, etc.,
- A simulation where you can try out a new cell phone, or
- A software simulation in a sandboxed environment (so real data is not affected).

**Level(s) of Interaction:** 3,4

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural
- Metacognitive

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## 25. Solving a Mystery / Investigating a Scenario

**Description:**

Place the learner in a story as a character that must investigate or do research to solve a puzzle or problem. Have them obtain information from several sources and then decide upon a final conclusion.

The learner should have to obtain clues found in pseudo-real-world sources. For example, show images of file cabinets that the learner must open to find clues; show people that the learner must interview; show documents that they must read for more information, etc.

Use examples of information sources that the learner would encounter on-the-job.

**Example:**

Consider these scenarios:

*You are a doctor evaluating a new patient. Use the available resources to make your diagnosis.*

*You are a police officer investigating a robbery. Use the available resources to build your case and find the criminal.*

**Level(s) of Interaction:** 3,4

**Knowledge Type(s):**

- Factual
- Conceptual
- Procedural
- Metacognitive

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## eLearning 2.0 Interactions

eLearning 2.0 is a recent movement that emphasizes the use of Web 2.0 technologies to enhance the ways in which we learn and share information. eLearning 2.0 also focuses more on collaboration between learners and the use of advanced web-based tools for storing and retrieving information. While the interactions outlined in this eBook are generally used in eLearning courses, eLearning 2.0 takes place outside of a typical course. Some eLearning 2.0 interactions include: team collaboration using a wiki, sharing of information and resources via social bookmarking, using a blog to communicate and share ideas, and using RSS readers to receive information that is highly-relevant to the learner. These interactions allow the learner to contribute their knowledge on a specific theme, design problem, or subject area, while also benefiting from the knowledge of their peers.

Read more about eLearning 2.0 at Tony Karrer's *eLearning Technology* blog<sup>6</sup>.

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