

# Where's the Instructor? Effective Design for Asynchronous Learning

## WORKBOOK

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# AGENDA

## Morning 9:00am – 12:00pm

- Welcome and introductions
- What's good about asynchronous learning?
- Instructional design – the basics
- Embedding the instructor in self-paced design

## Lunch 12:00pm – 1:15pm

## Afternoon 1:15pm – 5:00pm

- Embedding the instructor in self-paced design (continued)
- To quiz or not to quiz?
- Augmenting the learning experience
- Wrap-up



# What's Good About Asynchronous Learning?

## Online Learning Formats

- Live Online
  - Instructor-led webinar, videoconference, Google Hangout, etc.
  - Instructor and learners meet at same time in a virtual interface
- Asynchronous, Instructor-led
  - Recorded lectures, online resources, like MOOCs
  - Instructor interaction through discussion forums and email
- Self-Paced
  - Online courses, tutorials, job aids, how-to videos, articles, etc.
  - No direct instructor interactions

## Advantages of Asynchronous Learning

- For administrators:
  - saves time and money
  - cost-effective and consistent instruction delivered across a system or state
- For learners:
  - convenient with anytime/anywhere access
  - accommodates different learning styles
  - allows learner autonomy
  - equalizing effect among learners
- It's environmentally friendly!



# Instructional Design – the Basics

The instructional designer **crafts** a learning **experience** that **guides** the learner through a **relevant context** to make decisions **applicable** to their **real-world work**.

(paraphrased from Tom Kuhlman, [Rapid E-Learning Blog](#))

## Characteristics of Adult Learners



1. Self-directed: Adults are accustomed to moving through the world with some level of autonomy; they appreciate opportunities to explore.



2. Past experience: Adults bring a rich array of past experiences to any new situation; the brain learns most powerfully when it can connect new information and concepts to that which is already known and understood.



3. Relevance: Adults need to know why the new information is relevant, how it will make their lives and work better.



4. Task-oriented: All ages—not just adults—learn by doing. Being able to practice or apply new information, including making mistakes, is the most effective way to solidify the learning.



5. Immediate application: Especially in workplace learning, adult learners want to be able to apply new knowledge immediately.

### *Great designers are great empathizers*

- Who is your target audience?
- What will you do to try to understand what it's like to be in their job and to have their challenges?

## Learning Objectives

Rule of thumb: determine what you want learners to be able to **DO** as a result of the training

**Words to avoid** (or use sparingly)

—*Know, understand, be aware of, appreciate, be familiar with*

—Why? The words describe behaviors that are not actionable and can't be observed

**Recommended words**

—*List, describe, define, demonstrate, write, plan, use, create, compare, select, design, implement, explain, articulate*

—Why? The words indicate actions that are observable

Example

- Weak: Understand how libraries use learning circles
- Strong: **Plan** and **implement** learning circles at their libraries around topics of interest to their patrons

Write your learning objectives.

As a result of this training, learners will be able to:

1.

2.

3.

4.

5.

Note: Learning objectives are not an outline of the course and do not represent a one-to-one relationship with the course content. One learning objective may be addressed at multiple points in the course; or one part of the course may address multiple learning objectives.

As you develop the course, check back to make sure the content is meeting the stated objectives.

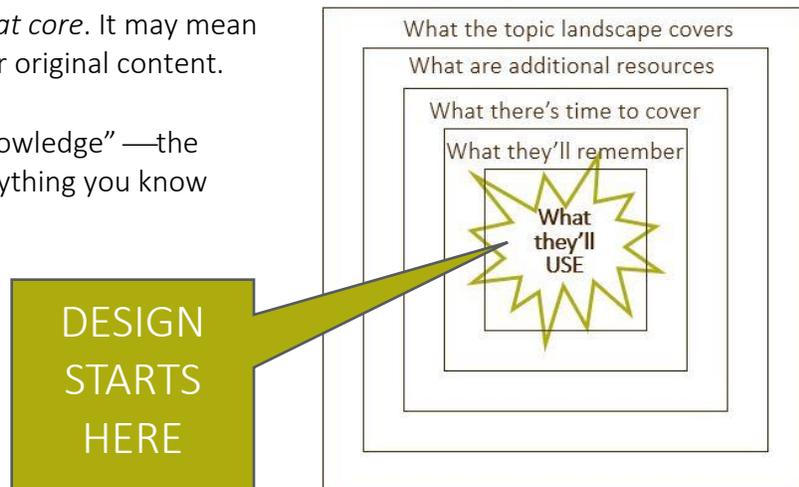
# Embedding the Instructor in Self-Paced Design

## 1 Guide the learner

It's always critical to provide a clear learning path for the user. As subject matter experts, we are often tempted to include everything we know about a topic, to pile on resources and multiple aspects to make sure the learner doesn't miss any gems of knowledge. But this can result in **cognitive overload**.

For any topic that you'd like to develop as asynchronous learning, find the essential 20%.

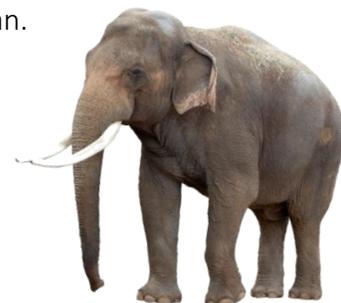
- What are the essential skills and knowledge that your learners need in order to apply their learning on the job?
- Build the course *around that core*. It may mean trimming up to 80% of your original content.
- Beware of the “curse of knowledge” —the temptation to include everything you know about a topic.



Adapted from Bozarth, J. (2008). From Analysis to Evaluation: Tools, Tips, and Techniques for Trainers

### Strategies for guiding the learner and easing cognitive load

- Signal what's important by **bolding**, underlining, **zooming in**.
- Chunk the content into “bite-size” segments. In *Brain Rules*, Dr. John Medina suggests gearing content chunks for the average 10-minute attention span.
- Provide scaffolding, simple-to-complex sequencing.
- And remember the elephant.



## 2 Show rather than tell

### How to make a toasted cheese sandwich

- Thinking of someone from a different culture (or planet) who has never heard of a toasted cheese sandwich, describe the process of how to make one. Use *only drawings* (no text).
- What did you take away from this activity?



### Strategies for showing to enhance telling

- Draw on the power of images to convey information and to tap into emotions.
- Literally embed the instructor in the course through videos ...but keep them as short and chunked as possible.
- Create short tutorials on how to execute a process.

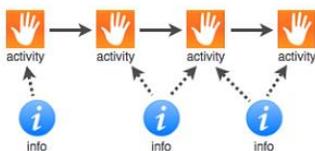
## 3 Provide a **relevant context** to connect the learning to the real world

## 4 Design **experiences** not information

These two principles are closely related in how they are applied to learning design.

The brain organizes new information around pre-existing knowledge, or “mental models.” The more context you can provide to something already familiar, the better the learner will be able to integrate new knowledge.

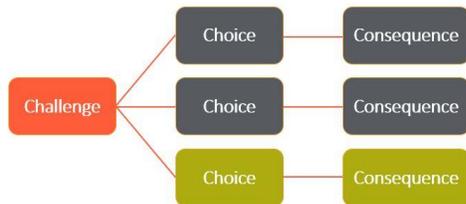
- **Metaphors** and **analogies** are helpful for connecting more abstract information to something familiar and concrete.
- **Scenarios** describe real-life situations that pose challenges and allow the learner to practice and understand consequences in a safe environment.
- This **problem-based learning** has been shown to enhance learner control over their learning, increase content retention, and improve attitudes toward learning.



Move away from linear, information-based training (info > info > info > quiz) to scenario and activity-based learning, with information provided as needed.

## Creating Scenarios and Problem-based Learning

Create decision challenges or problems to solve that are based on actual situations the learner may encounter on the job. Provide access to information and learning supports as the user needs the resources to make decisions in the scenario.



**Structure:** Challenge > Choices > Consequences

Practice writing a scenario, following the 6 steps.

1. **Define the objectives.** What do you want **students to learn** by working through the scenario?
2. **Identify the situation.** Describe a **real-life situation** in which learners could apply the intended objective.
3. **Identify the problem(s).** The primary goal of a scenario is to teach learners how to resolve a problem. Select the problem/challenge that **best addresses the objectives** and that will be appealing and relevant to learners.
4. **Identify a realistic trigger event.** The trigger event is the **conflict or crisis** that arises in the scenario, the point at which the learner has to choose how to respond.
5. **Define the choices.** Typically, 3-5 choices are offered for each trigger event. One will be the **optimal choice**, with the others being **less desirable choices**. Aim to craft choices that really challenge the learner to think; avoid overly obvious wrong choices.

For **Step 6**, see page 9.

# To Quiz or Not to Quiz

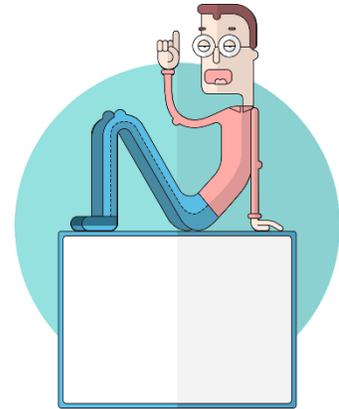
## Rethinking the Quiz

*“Self-testing is one of the strongest study techniques there is.”*

—How We Learn: the surprising truth about when, where, and why it happens; Benedict Carey

**Retrieval practice** is the act of trying to recall information *without having it in front of you*. Recall strategies include:

- After completing a lesson, ask learners to do a **brain dump** on paper—write down as much as they can remember. Asking students to retrieve broadly encourages them to think about multiple aspects of the material. Repeat this at a later time.
- Use **low-stakes quizzes**, i.e., grades or certificate are not dependent on quiz scores; include constructive feedback about learners’ choices.
- Create **flashcards** for key points to remember. Urge learners to go through the cards on at least three different occasions and say each answer out loud; shuffle the deck each time to make the practice less predictable.



## Constructive Consequences

6. **Turn feedback into effective instructional tools.** For each “wrong” choice in the scenario you created on page 8, provide a thoughtful explanation of why it was not the optimal choice. Suggest alternate ways to arrive at solutions.
  - Avoid negative statements. Phrase feedback to reinforce rather than discourage learning. The learner should not feel penalized for making a less-than-great choice.
  - For the optimal choice, say more than “that’s correct!” Reinforce why it was the best path to choose.

1. Consequence one

2. Consequence two

3. Consequence three

# Augmenting the Learning Experience

## 1 The Learning Environment

The asynchronous interface does not have to be a sterile environment.

- Liven it up with color, art, videos ...use your imagination.
- Provide activities that require learners to interact in real-life, such as doing practice interviews or role-plays with colleagues.
- Encourage learners to set up their physical environment to support learning, such as finding a quiet room, blocking out learning time on their calendars, and allowing enough time to concentrate.

## 2 Learner Guides

Tap into the power of the hand-brain connection by providing a downloadable, printable study guide. It lets learners take notes and track their learning. A surprising number of people love the physicality of paper and pen.

## 3 Discussion Forums

You might wonder what's the point of a discussion forum in a self-paced course? There are pros and cons to including forums. For a course that will be taken simultaneously by a number of learners, it's a fertile place to share experiences and reflect together on their learning.

## 4 Facilitated Learning Groups

Also referred to as "learning circles," facilitated groups re-introduce some advantages of synchronous learning:

- learners motivating and keeping each other on track
- collaboration on learning activities and application
- providing each other with context for their learning
- sharing individual insights and perceptions



# Notes and Reflections

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# Resources for Asynchronous Learning

## Learning Theory and Research

- **Cognitive Load Theory and Its Application in the Classroom**, Impact: Journal of the Chartered College of Teaching: <https://impact.chartered.college/article/shibli-cognitive-load-theory-classroom/>
- **How We Learn: the surprising truth about when, where, and why it happens**, Benedict Carey: <https://www.worldcat.org/title/how-we-learn-the-surprising-truth-about-when-where-and-why-it-happens/oclc/1050016514>
- **Instructional Design**: <https://www.instructionaldesign.org/>—an encyclopedic reference that includes a [glossary of instructional design terms](#), more [theories](#) and [instructional design models](#) than you need to know about
- **Mental Models and Reasoning**, Philip N. Johnson-Laird: <http://mentalmodels.princeton.edu/papers/2017MMs&reasoning.pdf>—or the more accessible summary [What are Mental Models?](#)

## Basics of Instructional Design

- **Design for How People Learn**, Julie Dirksen: <https://www.worldcat.org/title/design-for-how-people-learn/oclc/1107454979>
- **Digitizing Literacy: Reflections on the Haptics of Writing**, Mangen and Velay, IntechOpen: <https://www.intechopen.com/books/advances-in-haptics/digitizing-literacy-reflections-on-the-haptics-of-writing>
- **Extreme Empathy**, Paul Backett, Industrial Designer: <https://www.core77.com/posts/20375/research-learning-extreme-empathy-by-paul-backett-20375>
- **How to Use Design Thinking in Learning Experience Design**: [http://thelearningcoach.com/elearning\\_design/design-thinking-for-instructional-design/](http://thelearningcoach.com/elearning_design/design-thinking-for-instructional-design/)
- **Training Designer's Guide to Saving the World - 6 steps to relevant, powerful training**, Cathy Moore: <https://s3.amazonaws.com/cathymooremedia/training-designers-guide.pdf>
- **Understanding Learning Styles**: <https://www.lambdasolutions.net/blog/science-of-elearning-understanding-how-learners-engage-with-content#>
- **What is Cognitive Load?**, Connie Malamed: <http://thelearningcoach.com/learning/what-is-cognitive-load/>

## Asynchronous and Self-Paced Learning Design

### General Information Sources

- **Articulate E-Learning Heroes**: <https://community.articulate.com/>—continually refreshed sound advice from a roster of instructional design experts
- **eLearning Guild**: <https://www.elearningguild.com/>

- **E-Learning Modes**, WebJunction: <https://www.webjunction.org/documents/webjunction/elearning-modes-webjunction-2014.html> —chart with comparison of three online training modes
- **Online Training Resources**, WebJunction: <https://www.webjunction.org/explore-topics/create-deliver-training/online-training-resources.html> —includes [Image Resources](#), [Learner Engagement](#), and [Webinar Success](#)
- **The Rapid E-Learning Blog**, Tom Kuhlman: <https://blogs.articulate.com/rapid-elearning/>

#### Relevance and Scenarios

- **6 Powerful Learning Strategies You Must Share with Students:** <https://www.cultofpedagogy.com/learning-strategies/> —spaced practice, retrieval practice, elaboration, interleaving, concrete examples, dual coding
- **Branching Scenarios**
  - **Build Branched E-Learning Scenarios in Three Simple Steps**, Tom Kuhlman: <https://blogs.articulate.com/rapid-elearning/build-branched-e-learning-scenarios-in-three-simple-steps/>
  - **Key Skills Practice**, Tom Kuhlman: [http://articulate-heroes-authoring.s3.amazonaws.com/Examples/Storyline/SL2/StatingtheProblem/story\\_html5.html](http://articulate-heroes-authoring.s3.amazonaws.com/Examples/Storyline/SL2/StatingtheProblem/story_html5.html) —example of a branching scenario built in PowerPoint
  - **Providing Constructive Employee Feedback:** <https://learn.webjunction.org/course/search.php?search=providing+constructive+employee+feedback> —example of a branching scenario built in Storyline
  - **Storytelling and Scenarios**, blog post series from Christy Tucker, learning design consultant: <https://www.christytuckerlearning.com/storytelling-and-scenarios/> —including [Choosing Branching Scenarios When They Matter Most](#) and [When Should You Avoid Branching Scenarios?](#)
  - **Story Writing for Scenarios** (35-minute webinar recording): <https://www.lambdasolutions.net/thanks-recording-choose-your-own-elearning-adventure-how-to-create-branching-scenarios-l1>
- **Microlearning: The Misunderstood Buzzword:** <https://learningrebels.com/2017/07/17/microlearning-the-misunderstood-buzzword/> and **7 Deadly Myths of Microlearning:** <https://learningrebels.com/2018/04/25/7-deadly-myths-of-microlearning/>
- **Mental Models for Learning Design**, Clark Quinn, PhD: <https://www.litmos.com/blog/articles/mental-models-learning-design>
- **Project-Based Learning Research Review**, Edutopia, 2015: <https://www.edutopia.org/pbl-research-learning-outcomes>

## Quizzes and Consequences

- **3 ways to help people learn from mistakes in branching scenarios**, Cathy Moore: <https://blog.cathy-moore.com/2018/04/3-ways-to-help-people-learn-from-mistakes-in-branching-scenarios/>
- **Anatomy of Great e-Learning Quiz Questions**: <https://elearningindustry.com/the-anatomy-of-great-e-learning-quiz-questions>
- **How to Write Effective Quiz Feedback**, E-Learning Heroes: <https://community.articulate.com/articles/how-to-write-effective-quiz-feedback>
- **Retrieval Practice: The Most Powerful Learning Strategy You're Not Using**: <https://www.cultofpedagogy.com/retrieval-practice/>
- **Retrieval Practice and Transfer of Learning: Fostering students' application of knowledge**, UC San Diego: <http://pdf.retrievalpractice.org/TransferGuide.pdf>

## Augmenting the Self-Paced Learning Environment

- **Facilitator Guides** from WebJunction
  - General Facilitator Guide (for any learning experience): <https://www.webjunction.org/content/dam/WebJunction/Documents/webJunction/2019-07/facilitator-guide-group-learning.pdf>
  - Facilitator Guide for Supercharged Storytimes (example of a course-specific guide): <https://www.webjunction.org/content/dam/WebJunction/Documents/webJunction/supercharged-storytimes/facilitator-training/facilitator-guide-supercharged-storytimes.pdf>
- **Learner Guide Samples**
  - WebJunction Webinar Recordings: <https://www.webjunction.org/events/archives.html>  
—Look at any of these webinar pages and you'll find a Learner Guide, such as this one for [Is That Real? Verifying Online Content](#)

## Tools for Instructional Design

- **E-Learning Tools**, comprehensive curated list by Tracy Parrish: <https://e-learning.zeef.com/tracy.parrish> —includes screen capture, file sharing, audio and video editing, course authoring, animation and *much* more
- **H5P**: <https://h5p.org/> —a plug-in that makes it easy to create interactive web content; integrates with many publishing systems, such as Moodle or WordPress, or can be directly linked or embedded from [H5P.com](https://h5p.com/) (\$)
- **Moodle**: <https://moodle.org/> —a popular open-source learning management system that is supported by a global community of users; [Moodle YouTube](#) channel has 100s of how-to videos