Best Practices for Asynchronous (Self-Paced) Online Trainings
Document Purpose

The purpose of this document is to outline the steps and best practices for developing asynchronous (self-paced) online training. It provides a high level look at the design and development process, the roles and responsibilities of those involved with these processes, and provides guidance and best practices to avoid pitfalls in the design and development process.

Process for Creating Asynchronous Online Training

Designing the Training

A common process to follow when designing online training is ADDIE (Analyze, Design, Develop, Implement, and Evaluate).

Analyze

Designing a training starts with identifying the problem or need as well as the target audience for the training. Once these are clearly established, the instructional designer (ID) begins to gather data to assess what learners need to know. Usually, this is gathered in a needs assessment. The needs
assessment tells the ID about the learners, what they may already know, and what they need to know; and narrows down how to best help learners acquire knowledge by taking the training. Data can be gathered in a variety of ways, depending on time and resources, through focus groups, interviews, observations, and questionnaires, for example. After a needs assessment is conducted and the data are analyzed, the ID works with a subject matter expert (SME) to identify the goals for the training and learning objectives.

Design

The **training goals** identify what the learner will be able to do at the end of the entire training. The **learning objectives** identify the knowledge, skills, and attitudes that the learner will need to achieve to meet the training goals. The goals and learning objectives guide the development of the training content. The SME provides outlines and specific content pieces that the ID organizes in a logical way for learners. The ID also uses the learning objectives to create assessment questions to check the learner’s knowledge of the content.

The ID and SME go through several iterations of the outline to finalize the content. Once the content is finalized, the ID creates storyboards (see sample to the left). Storyboards reflect the ID’s vision for the programmed training, and describe how the developer can create the training to meet that vision.

Storyboard templates let the ID know which authoring tool software will be used and the functionality that can be programmed into the module (such as buttons and videos). After the ID and SME complete the storyboard, but before it is sent to the developer, an editor should review it to make sure the writing is clear, accurate, and grammatically correct.

Several common interactions and complex interactions can be used in asynchronous training.
Videos

Videos can provide an alternative means of conveying information. Videos should not be any longer than 3–5 minutes. A good way to use videos is to demonstrate a concept, illustrate an action, or present interviews. They also can be used to set up a scenario-based problem.

Knowledge Checks

Knowledge checks assess a learner’s knowledge of the training topic. Questions can be multiple choice, true/false, short answer, and matching questions.

Buttons

Buttons display textual information, open job aids, and launch web resources and more interactions. Buttons allow the learner to engage with the screen to display content, advance a scenario, and connect with additional resources to supplement content.
Resources

Resources provide additional information about the training and help learners explore the topic in more depth.

Complex Interactions

Complex interactions include items that provide guidance or an interactive challenge to participants. For instance, an avatar may be used to help guide a learner through the training. Complex avatars may be able to provide coaching to learners based on their performance in the training. Other complex interactions may be interactive games or scenarios that have outcomes that change based on the learners’ decisions. These can be helpful when trying to simulate an actual situation a learner may encounter.

The ID should include any images, narration, audio, or video for these interactions that the developer will either need to collect from the ID or collect from media sites, such as ThinkStock.com or other stock image sites.

It is helpful to have the ID and developer go through the storyboards together to make sure there is a common understanding of the vision of the training. Once the ID and developer are in agreement about the vision of the training, development of the training can begin.

Develop

The developer takes the storyboards the ID provided and programs a functional module. Sometimes, it can be helpful to create one lesson from the module to demonstrate to a client the functionality, look, and feel of the module. This module is referred to as a prototype. If the prototype is acceptable, the rest of the training is developed according to the storyboards.

The developer uses authoring tool software (some of which may include programs such as Captivate, Storyline, and SmartBuilder) to program the training. This process can happen quickly or can take a while, depending on the amount of content or the types of interactions included in the module. The greater the number and the more complex the interactions (e.g., using games or avatars), the longer the development time.

Once the module is programmed, the developer conducts a Quality Assurance (QA) test to catch any technical issues with the module. Most issues will be caught in this test, but there may be some that
appear during the alpha and beta reviews that were not caught in the QA test. A typical QA test will include, at minimum, testing the following:

- Functionality of buttons
- Functionality of links
- Functionality of any videos or animations
- Functionality of any navigational elements (such as next and back buttons)

After the developer completes the QA test, the module is then ready to be reviewed by the alpha reviewers.

Reviewing the Training

**Alpha Review:** The first review is conducted by the alpha reviewers. There can be two, three, or many more reviewers, depending on the complexity, sensitivity, or importance of the topic. The more reviewers you have, the more feedback will be gathered, and potentially the more diverse points of view will be reflected and incorporated into the beta training or module version. The alpha review is important because this is when substantial changes to the programming or content can still be easily made. If screens need to be moved, or an interaction changed, it should be noted during this review.

The alpha reviewers go through the training or module in its entirety to make sure there are no technical issues, the content is accurate, and the interactions programmed into the module make sense (such as using buttons to display content as opposed to narration).

The alpha reviewers use a form provided by the developer to document feedback, noting the specific screen and a detailed explanation of the issue.

Once the reviewers submit the alpha reviews, the developer updates the module to reflect the feedback. After updates have been completed, an editor does a final review of the module and makes any edits needed to the content. When all changes are complete, the module is ready for a beta review.

**Beta Review:** The training is sent to the beta reviewers (link to beta reviewers roles and responsibilities) who check the module mainly for content accuracy—“show stoppers.” Like the alpha reviewers, beta reviewers should document all their changes on the same type of form that the alpha reviewers used. And like the alpha review, the number of reviewers can vary from a few to 10 or more. All changes should be sent to the developer to make revisions. At this stage, revisions should be relatively minimal since the training or module has already gone through the alpha review, unless the beta reviewers note that the changes are critical.
If critical changes need to be made, the ID, developer, and perhaps the SME may need to work together to create the new content and screens for the module. All major changes should be reviewed by an editor before declaring the module ready for testing for 508 compliance and Learning Management System (LMS) testing.

**Testing the Training**

When the training has been alpha and beta reviewed, 508 compliance (508c) testing begins. Section 508, an amendment to the United States Workforce Rehabilitation Act of 1973, is a federal law mandating that all electronic and information technology developed, procured, maintained, or used by the Federal Government be accessible to people with disabilities. This check makes sure that all alt text for images and buttons, transcripts for audio and video, and tabs within the training meet 508c standards. The 508c reviewer should document all issues and work with the developer to update any discrepancies found in the compliance check.

When all 508c testing is complete and the training passes the compliance tests, the module is loaded into the LMS where the training will live. The LMS is an organized site for the administration, documentation, tracking, reporting, and delivery of electronic educational technology (also called e-learning) education courses or training programs. The module should be tested in its entirety to make sure that all functions work correctly. This test also should be run to make sure the LMS generates certificates of completion (if included) and any assessment scores (if included), and tracks user progress in the training.

When training passes LMS testing, it is ready to be implemented.

**Implement**

Implementing the training is a relatively easy step. Usually, this involves uploading the final version of the modules and lessons into the LMS and making the training active within the LMS. Consult your LMS administrator for standards of procedure to make your training available to the public.

**Evaluate**

Participant feedback on the online training should be gathered through evaluations. The evaluation should include feedback regarding the functionality of the product as well as the information contained. Feedback on how the information is presented in the module or lesson should also be collected in an evaluation. The evaluation may be contained within the last module or lesson of your training. It can also be included in the LMS, or emailed to a participant after they complete the module or lesson.
## Roles and Responsibilities

**Alpha Reviewer:** An SME and ID that has helped develop the module. Alpha reviewer(s):

- Review the module for functionality and instructional sequencing.
- Note any technical issues with the module.
- Provide feedback for the ID and developer to implement.

**Beta Reviewer:** A client staff member who is an expert in the content being developed. Beta reviewer(s):

- Review the module for content accuracy.
- Note any technical issues with the module.
- Provide feedback for the ID and developer to implement.

**Developer:** Programs the module or training. The developer:

- Provides the storyboard template to the ID to make sure modules are designed according to the parameters of the authoring tool software used to develop the module.
- Reviews the storyboards for accuracy before developing the module.
- Uses authoring tool software to develop modules (including programming, asset collection, initial QA testing, and implementing updates to modules based on testing).
- Works with the designer to iron out any design issues with the module.
- Runs a technical check to identify and fix any technical issues.
- NOTE: This role may design and develop modules.

**Instructional Designer:** Designs the training. The ID:

- Assesses the content to be covered to make sure it applies to the training.
- Works with an SME to collect content for the module.
- Uses instructional design strategy and theory to sequence content and make it interactive.
- Creates outlines and detailed content from SMEs.
- Creates storyboards for developers to use in programming the module.
- NOTE: In some cases, may design and develop modules.

**Subject Matter Expert:** Provides content for the module or training. The SME:

- Works with the ID to collect content for the module.
- Provides outlines, storyboards, and detailed information for the content to be covered.
- Reviews updated content from ID.

**508 Compliance and Final QA Testers:** A staff member who runs 508 compliance checks and verifies Learning Management System testing results. The testers:

- Run the 508 compliance check process to ensure modules and any job aids are 508 compliant.
- Provide feedback to the developer for any changes needed to the module.
- Test the module in the LMS to ensure all tracking works properly (scores, progress, certificates of completion, and other functionality).
References and Additional Readings


Alpha or Beta Reviewer Form

<table>
<thead>
<tr>
<th>Your Name:</th>
<th>Date of Review:</th>
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<tbody>
<tr>
<td>________________________</td>
<td>________________</td>
</tr>
<tr>
<td>Module Name:</td>
<td>________________________</td>
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</table>

<table>
<thead>
<tr>
<th>Screen Number</th>
<th>Detailed Description of Feature/Issue</th>
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## Storyboard Template

### Storyboard #:
T00015

### Title of Screen
Sample text
- Sample text

### Sample text

### Prompt:
Select Next to continue.

### Navigation/Branching:

<table>
<thead>
<tr>
<th>Button</th>
<th>Go To</th>
<th>Other Selections</th>
<th>Go To</th>
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</thead>
<tbody>
<tr>
<td>Next</td>
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<tr>
<td>Back</td>
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<tr>
<td>Email</td>
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<tr>
<td>Play/Pause</td>
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</tbody>
</table>
**Programming Information:**
Describe the way the screen should function here. This would include items appearing and disappearing, buttons on the screen, etc.

**Graphics Information:**
List graphics to be used here.

**Alt Text:**
List the image and the associated alternate text for 508c here.

**Audio:**

<table>
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<th>Timed with . . .</th>
<th>Narration Script</th>
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<td>Narrator:</td>
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