City of Portland
eLearning Content Design
Guidelines

eLearning Content Design Guidelines

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Introduction

eLearning Content Design Guidelines

Bureau of Human Resources (BHR), Workforce Recruitment and Training (WR&T) Team actively work with, design and create eLearning's for citywide training. We encourage bureaus to consider this delivery method for their bureau. WR&T will provide training and support throughout the process. This guide will assist the design process, requirements for eLearning's, terminology, bureau responsibilities, best practices and the level of support WR&T can provide. **WR&T has final authority to determine if eLearning content and display fits reasonable and professional design standards of the City of Portland.**

eLearning Design Process

There are many documents and steps eLearning designers take and develop when creating an eLearning. Each designer has their own style and approach. The following steps are used by WR&T and have been found most effective to ensure citywide eLearning standards are followed for equity, accessibility (Attachment A), documentation and retention, and user feedback integration. This process is a guide. the steps and order are guideline, the eLearning design and documentation is at the discretion of the designer. There are however, requirements identified in this process that must be followed when developing eLearning's for the City of Portland (COP).

Process

Step 1: Create course outline. Creating a course outline will help identify the order of content, content objects and a general design scheme. Keep timing and length in consideration, keep them down to 15-30 minutes. If a course is longer, separate it into multiple courses that can packaged together with the Multi SCO Packager. This enables publishing content as modules/sections for a single course.

Step 2: Set up eLearning design, formatting, master slides, closed captioning options and publishing preferences in eLearning developer program (Captivate). Creating 3-4 master slides enables the designer to pick a master with a predetermined format. This the time to format the following:

- Select **font style and size**

  Best Practices/Accessibility Requirement: sans serif fonts are easier to read for those with visual impairments. Avoid using fonts that are overly stylized and difficult to read. Examples of suitable sans serif fonts include Arial, Calibri, Lucida Sans, Tahoma and Verdana. The minimum font size is 14 (Attachment A).

  Best Practice: Avoid overuse of all-caps or all-bold and avoid italics when possible (use bold or underline instead). Set a ragged right margin for text to be read by the learner. Fully justified text (both left and right) is more difficult to read. Avoid putting too much text on a screen; learners find excessive text difficult to read, which negatively impacts learning effectiveness and retention.

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- **Style content objects** for titles, subtitles and content text.

  Best Practice: It's best if font style and size are consistent throughout the eLearning to eliminate distraction. In addition, avoid bullets, they're not needed in eLearning's when timing is of the appearance of content objects is available. Styles can be created in Captivate for convenience.

  Best Practices/Accessibility Requirement: Set accessibility descriptor on each item to ensure screen readers can read and help user navigate the screen.

- **Color scheme** – Identify the color scheme

  Best Practice: Keep it simple, too many colors distracts learners, four colors or less ensures consistency throughout eLearning. Use plain backgrounds, use of busy, graphic backgrounds makes text very difficult to read and is distracting to learners. The best background colors for black text are off-white, cream, ivory, light yellow, and light pink.

- Set **background** for master slide

  Best Practice/Accessibility Requirement: Background color should be dark or light enough to ensure contrast between background and font to ensure learners can clearly read text.

- Set **Close Caption (CC)** – <u>All eLearning's</u> must have CC for all audio. If all text on the slide matches the audio, CC is not needed.

  Best Practice: The CC box formatting city employees are the most accustom to includes: length of the CC box should stretch across the screen at the bottom of the page; with a two-line width to ensure screen size adjustments don't impact visibility.

  Best Practice/Accessibility Requirement: Background for CC should be at 90% contrast to ensure CC is easily distinguishable from background, contrast text from background. The best font to use is Arial or Calibri with a minimum size of 14.

- **Publishing** Settings – Set **Author, Copyright Information, Course Description, Audio, Video and Output Settings** – Description information will load to LMS for user convenience.

  Best Practice: Avoid text-to-speech when possible. If recording options are limited due to equipment or software, please contact WR&T for assistance. Video and audio files should be optimized. Audio and video files should be compressed to minimize file size. The default audio settings for publishing SCORM content in Captivate are: MP3; 96 kbps; 44,100 Hz.

  Video Resolution: Always start small! Most video converters will allow for a plethora of video

output formats and options. Do not use the High Definition setting in Captivate as eLearning rarely requires that level of video quality.

a. Start with a minimal acceptable resolution (less is more).
b. Adjust the resolution up to suit the video needs (text **in** videos can become unreadable due to compression). All videos still require closed captioning which can be added in captivate vs adding it to the video itself.
c. Fragmentation: Consider breaking any video in to sections or chapters. This allows for basic navigation through the video if needed and smaller video segments are more palatable to the learners. A movie made of sections can load one section at a time, lowering the overhead on the network.

Step 3: Create **Script** – Creating the script assists with planning the design of the eLearning. The script helps identify content objects. For example, a list of topics being covered in the training, would be presented as content objects rather than using bullets.

Best Practice: It's important that the script be reviewed, edited and finalized prior to recording the audio. Ensure the script has clear breaks in the content to ensure the narrator can identify when to add a pause in the audio, etc.

Best Practice/Requirement: Use gender neutral, first person language.

Step 4: Create a **Storyboard** – the storyboard a living document and will assist with organizing the eLearning and provide details another designer can use to fix issues with eLearning's and/or recreate actions or slides when necessary.

Best Practices – The storyboard should be as detailed as possible. It's important to leave "bread crumbs" for analysts and other designers to duplicate and fix problems. With updates to the internet and Captivate, advanced actions can break, or files may need to be duplicated into new captivate versions.

Step 5: Create **eLearning** – using outline, storyboard and master slides created in previous steps to fill in the content, add content objects, identify buttons and actions needed to ensure training is interactive and users stay engaged. Maintain storyboard pictures of slides.

Best Practices: Update the storyboard while creating the content and updating slides. The storyboard will need to be updated regularly and finalized once the eLearning design has been completed. All content objects should be added, timing will be configured once the audio has been recorded and loaded.

Keep copyright requirements in mind. The City owns copyright in images it produces or contracts with others to produce on the City's behalf. When using images from third parties, any artwork, imagery or graphics supplied for use in the project must have the appropriate copyright permissions to reproduce by the City.

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The City of Portland is not responsible for copyright infringement claims involving materials supplied for use by a third party.

Images of Portland police employees must be pre-approved by Portland Police.

Best Practices/Accessibility Requirements:

- eLearning software has limitless choices for fonts and backgrounds. The best projects are designed simply and contain only the necessary visual elements to support learning.
- **All** text visible on the slide **must** be included in the audio for **that** slide, however, the audio script doesn't have to be added as text to the slide.
- **All** audio script must be either on the slide or contained in the closed captioning for **that** slide.
- **Drag-n-drop** doesn't function properly with the City's standard screen reader and should **not** be included in any eLearning.
- Use **Accessibility** label on each content object to ensure screen readers can assist users with navigation.
- All buttons should include instructions in script that identifies actions users should take on keyboard, example, "If you're using a screen reader, please press tab and enter on your keyboard to go to the next button."

Requirements: If pictures of people are being used, they must be diverse and equitable.

If a PowerPoint was previously created for the course, it can be used as a guide.

Step 6: Add **audio** – Record and load audio to eLearning library.

Best Practice:

- Avoid text-to-speech. WR&T can assist with audio recordings if needed to avoid text-to-speech.
- Use one-way microphone to isolate audio from external sound.
- Have two narrators, best to have two contrasting voices (i.e.,: male and female) to help keep users engaged.
- Schedule recording sessions with narrators.
- Separate the script for each narrator and send them a copy of their sections only.
- Send the script to narrators a few days before the scheduled recording sessions to ensure they have time to practice.
- Record entire script in one long recording, this ensures the volume and tone of narrator stays consistent throughout entire eLearning.
- Separate the audio using Adobe Audition for each slide, have a consistent naming convention for each slide (i.e., date_elearning abbreviation_Slide#_initials of narrator – 120519_BBP_Slide1_JM).
- Standardize volume of all recordings via Audition prior to cutting and editing.

Step 7: Adjust **timing** of content objects, buttons and add **closed caption**.

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> ***Best Practice***: It is most efficient to complete this step in the following order: add audio to slide>update timing of content object with audio>add closed captioning to audio. Divide script so that only two lines of cc are listed to stay within width preferences created in step 2.

> Copy and paste closed captioning from script. Listen carefully to audio while adding closed caption, any changes by the narrator needs to be updated in the script, storyboard and closed caption.

Step 8: Provide HTML file for user **testing**. All courses must be reviewed and tested by WR&T before loading to stage via the HTML scorm file. If the course functions as expected and all ADA requirements are met, course is loaded to stage for end-user training. WR&T will complete testing and review within 3-5 working days. Testing can be accommodated throughout the development process.

> ***Best Practice***: Provide tracking spreadsheet testers can use to identify issues, entities to test, and provide feedback. Fields to include: Slide #/Topic, Issue/Concern, Object timing, Object Consistency, CC Timing, CC and Audio, Recommended Actions, Review Date, etc.

> Provide WR&T the original Captivate files. WR&T provides additional services, when Captivate files are provided ([Attachment B](#)).

> Provide instructions to testers and a deadline for completing the testing.

> Once testing has been completed, update testing spreadsheet with the following fields: Status, Revision Date and Notes (for specific updates or explanation for changes not being made).

Step 9: **CityLearner Stage Load**
Update eLearning based on testing and submit eLearning to WR&T for load to stage and additional testing. This enables users not involved with eLearning development to test, review and provide feedback on course through stage. WR&T will review course to ensure all requirements have been met, provide feedback and test functionality prior to loading the course to stage. WR&T turn around time is 3-5 work days. To expedite the process, bureaus should supply the captivate file to WR&T. This will enable WR&T the opportunity to make minor adjustments to the file (cc size, minor timing issues, etc.) and republish. Any changes to the captivate file are reviewed with the bureau and only to comply with requirements. Submission of files via zip must follow the naming convention, (no space in file title).

> ***Best Practice***: Leave navigation buttons and progress bar visible during testing process to testers can navigate through the course easily without being required to complete each step. Remove the navigation buttons and progress bar once testing completed if desired.

Step 10: **CityLearner Production Load**
Update training based on testing and resubmit to WR&T for review and load to production if all requirements have been met and course functions appropriately.

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Assessments/Quizzes

Assessments/quizzes can be used to test user knowledge, effectiveness of the training and verify users reviewed all content. WR&T create assessments for all trainings sponsored by BHR since most are compliance related. If a training is optional, for user convenience, an assessment may not be necessary. Each bureau's TC can provide assistance with building assessments in the LMS.

Technical Requirements

The City of Portland currently uses SAPs SuccessFactors Learning Solution as its LMS.

1. All eLearning's must be submitted to WR&T for review and load to stage and production. The LMS loads to a server (iContent) that has limited space. WR&T maintains an inventory of all eLearning's file sizes to ensure the city doesn't go over the space allowed.

   Best Practice: Remove all unused content objects, audio, etc., from Captivate files prior to publishing.

2. All courses must be published as HTML files, not SWF. Flash is not supported by CityLearner and will be discontinued.

3. Captivate project and publish settings:
   a. Select 800x600 launch, screen size to ensure content can be viewed by the standard city monitor (Appendix B). In most instances, the screen will adjust as needed but may not function properly via cell phone. There is an option to create a fluid eLearning that will play on any screen size. However, there are limitations to fluid screens. A clear design plan should be in place prior to using fluid screens.
   b. Set preloader to 50% to prevent excessive user wait time while the content loads (Appendix B).
   c. Set Scorm standard to SCORM 1.2 in the quiz area to ensure the LMS can track user completion status (Appendix C). The Quiz option must be checked even though the captivate project won't contain a quiz.
   d. Set slide review requirement in the quiz section. If the desire is that the user will review all slides, set it to 100%, if the desire is only to provide access to users and no city training requirements are included, set it to 0%.
   e. Do not select the box next to Quiz in the Success/Completion Criteria, quizzes are done through the LMS Assessment option, not within eLearning's (Appendix C). This enables better reporting and tracking options, decreases eLearning load time and eLearning "breaks".

4. Published eLearning's/SCOs should be in a size/format that allows bookmarking and progress measurement.

a. SCOs should be limited in size to ensure server space. Larger SCOs will require extra remote testing (field users on broadband). Courses may be made up of a single SCO as long as size issues do not affect remote playback. Larger size files may be accommodated upon request to WR&T.

b. Course content may be broken into multiple SCOs for improved system performance, reusability, tracking and bookmarking when SCO size is too large. WR&T can assist with packaging if needed.

5. Video and audio files specifications are listed above in <u>Step 2</u>.

Equipment and Software Needs

Bureaus will need the following equipment and software. In some instances, software substitutions can be made but not recommended.

- Use a quality microphone. Studio quality USB microphones are widely available and are designed to provide increased detail and dynamic range. See additional recommendations in Step 6. A quality headphone is also highly recommended for audio recording. For recommendations, consult WR&T staff. In addition, WR&T may have equipment available for loan for one-time projects.
- Laptop or recorder that connect to the microphone. Audio can be recorded using Captivate on a laptop or can be downloaded from a recorder, however the microphone must be able to connect to either the computer or the recorder.
- Captivate for eLearning development. Some designers prefer Camtasia or other software. These programs are not as robust as Captivate and often have audio consistency issues. However, it is up to the individual designer to choose the software.
- Adobe Audition for cutting and editing audio. Audacity may also be used, but Audition projects can be opened and edited via Captivate.

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Terminology and Acronyms

Adobe Audition – Software used by WR&T to cut and edit audio.

Adobe Captivate – City's standard eLearning production software and the recommendation from WR&T. Adobe Captivate is the most robust software and enables the user to create an interactive experience for learnings.

BHR – Bureau of Human Resources, is the Business Owner of the City's Learning Management System (LMS), CityLearner (CL).

BTS – Bureau of Technology Services

Close Caption (CC) – Transcription of audio narration, <u>required for all city eLearnings</u>!

CL – CityLearner, is used to administer and manage training and develop programs for all City employees, including Instructor-Led trainings (ILT), eLearning's, etc.

COP – City of Portland

EBS – Enterprise Business Services, part of BTS bureau.

eLearning – A course learners complete online which automatically captures learner progress, scoring, time spent, and number of times accessed in the LMS.

HR Sponsored Training – Training sponsored and developed by BHR. Generally, HR Sponsored training is intended for learners citywide.

LMS – Learning Management System; a software program used to manage training and develop programs at COP. The City's LMS is a cloud bases system from SAP/SuccessFactors; which is owned and managed by BHR.

Production – CityLearner environment live to users. Testing of eLearning's is not done in this environment because it is live and available to end users.

SAP – Software application that integrates information for COP financial, human resources, and procurement processes.

SCORM – a set of technical standards for eLearning software products. COP currently requires SCORM 1.2 which is the most supported.

SCO – Shareable Content Object or published eLearning file. This allows packaging multiple eLearnings into one content package for loading to the LMS. Once loaded, the LMS automatically separates the package multiple content packages that can have individual titles and descriptions.

Stage – Test environment for CityLearner. City employees don't have access unless requested through WR&T. Access is only available to city employees with city email addresses. Requests for access are submitted to WR&T prior to testing, the TC should send a list of users including: First and Last name and PERNR.

Storyboard – Documentation, usually created in excel, is a detailed outline of each slide. Typically, it includes the following: slide number, description of slide content, script for slide, description of content object behavior (timing, buttons, etc.) and advanced action pics.

WR&T – Workforce Recruitment and Training

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Appendix

Appendix A

New Blank Project

Create a project with a blank slide, without recording any slides initially.

Select: 800 x 600 ▼

Appendix B

Width: 800   Height: 600

Preferences   Help...   OK   Cancel

Category

- General Settings
- Defaults
- ▼ Recording
  - Settings
  - Video Demo
  - Keys - (Global)
  - Modes
  - Defaults
- ▼ Project
  - Information
  - Size and Quality
  - Publish Settings
  - Start and End
- ▼ Quiz
  - Reporting
  - Settings
  - Pass or Fail
  - Default Labels

Styles Preview

Project Start Options:

☐ Auto Play: ⓘ

Browse...

☑ Preloader:

Browse...

Preloader %: 50

☐ Password Protect Project:

Options...

☐ Project Expiry Date:

Calendar...

☐ Fade In on the First Slide

Project End Options:

Action:

Stop project ▼

☐ Fade Out on the Last Slide

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Appendix C

Preferences