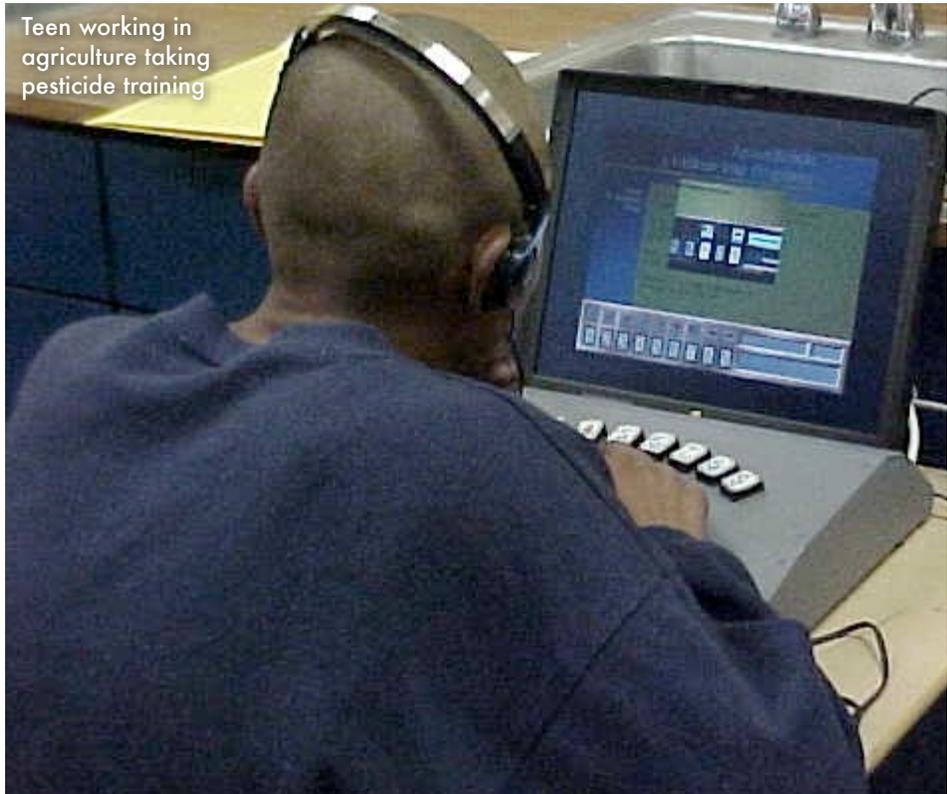


NWETA

PLANNING
A cTRAIN
TITLE



Planning a cTRAIN Title - Developing your own training

Needs Assessment

All training begins with a needs assessment. For safety and health training, workers' compensation claims or observations by supervisors or employees of dangerous work practices provide a solid basis for changes.

The Needs Assessment leads to goals and objectives for your training. The goal might be to reduce slips and falls, and the objectives might be to teach people the safest work practices or to improve housekeeping.

Safe Working Environment

A cardinal rule is to first ensure that work processes minimize accident potential and equipment has guards to prevent accidents.

Plan the Training

Begin by interviewing management, supervision, and employees. Define specific topics that need to be taught and each element to be included. For example, topics for orchard safety might be: Tools and equipment, carrying and setting ladders, working on ladders, clean-up and maintenance.

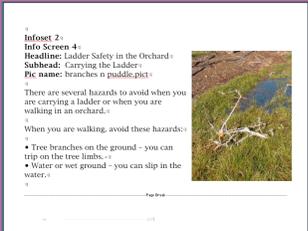
Every specific training element, every work practice, every step in each process needs to be listed and the text needs to be written in detail. Writing the complete text helps ensure you include everything. This should be done in a word processing program such as Word. Include photos that illustrate your training and depict complexities.

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Write your training in a word processing document using Hoeffler 24

The page on the right illustrates text for a typical screen that is the building block of your training. As you plan, you begin with a topic and a specific bit of information you want to convey. As you add more and more specific bits of information, you will want to change the order so the training flows in a logical sequence. This is easy to do in a word processing program. Use Hoeffler 24 to match the size you will use in the cTRAIN "package" or group of topics.



Planning your Infosets

Each cTRAIN “package” is organized into 1-4 topics. Each cTRAIN topic begins with an optional pre-test, presents the training, and ends with a post-test (this flow is illustrated on the right). You may have only 1 topic, but you will certainly have between 5 and 25 infosets within a topic. You can have as many infosets as you want in a topic, but each cTRAIN package is restricted to 4 topics. Of course, you can use as many 4-topic cTRAIN packages as you want, but this will add to startup and program management time.

What is an Infoset?

An Infoset or Information Set consists of “Info screens” that contain the training information and “Quiz screens” that provide multiple choice questions (2-4 answers). We recommend that you include 3-5 Info Screens and 1-3 Quiz screens in each Infoset.

Why so few?

The basic principle is that quizzes should occur very frequently to prevent a student from progressing too far in any part of the training before making sure they are understanding and retaining the information. There is also a practical reason. When a student selects the wrong answer to a quiz question, they repeat the entire information set (except they skip any questions they already answered correctly). If the Infoset contains many Info screens, this will slow their repetition of the screens, and this can be generally aversive to the student.

What does it look like?

An Infoset is a sequence of screens. If you planned an Infoset with 4 Info screens and 2 Quiz screens, it would look like this:

- Infoset
- Info screen
- Info screen
- Info screen
- Info screen
- Quiz screen



Quiz answer feedback?

Feedback is illustrated above. Following a correct answer the face is smiling; following an error, the face is frowning.

Feedback informs the student if they answered the question correctly. If training is designed properly, even those with limited education or learning skills should make relatively few errors. So, if errors occur frequently, such as on every question or every Infoset, the training has not been written properly for the target audience. The Infoset structure is intended to teach the student effectively and efficiently. The short Infoset concept is designed to prevent a student from progressing too deeply into the training without learning the information.



How much is too much?

While there are no practical limits on the number of Info screens or Quiz screens in an Infoset, nor on the number of Infosets in a Topic, there are limits on how long any training session should run. You should plan a session to run about 50 minutes. However, that is 50 minutes for the typical member of your target audience. Because cTRAIN is self-paced, everyone will finish at a different time, in some cases very different.

For example, we recently conducted a research study on training with agricultural workers. This group of workers had all been educated in Mexico or Central America, and many had not been able to complete school because they needed to earn a living. They had a range in years of formal education from 0 (no school) to 15 years. All workers were familiar with ladder safety in orchards, the topic of the training. The better-educated completed the training in about 40-50 minutes, but some took over 2.5 hours to complete the same training. Every person answered more questions correctly on the post-test than they did on the pre-test. While every person rated the training as OK to excellent (none rated it as not too good or poor), those who took 2-2.5 hours appeared quite tired when they finished, though proud of their accomplishment.

The lengthy training time included both the pre-test and the post-test. The advantage of the pre-test is that you can determine how much information they know before the train-

ing so that you know if the training is worthwhile.

The pre-test and post-test are identical. The quiz questions in the training can be the same as those in the pre-test and post-test, but they can also be different.

Pre-Test
Info Set
Post-Test

Is training effective?

We recorded work practices in the orchards before and after cTRAIN ladder safety training, in the research study described below. As the graph shows, about 75% of the orchard workers began holding their loppers more than 12" from their face (better), while the rest got worse or didn't change when climbing up or down the ladder. These results are from our field observations in the orchard, and these changes maintained at 40 days after training when we repeated the field observations.

Of course, training is more effective when supervisors reinforce the work practice changes taught in the training.

More?

What if I want my students to have access to supplementary information that is not essential to the training but will give greater insight into the training topic. Also, I don't want to slow down the production workers who just want to learn the required information but really doesn't care why the process works as it does?

This is what the cTRAIN “More” button is for. You can include as many screens of information or pictures or movies as your disk space permits.

You may want to plan “More” screens in a separate Word Processing document so that they don't interrupt the flow of the training in your primary document. “More” screens can be linked to any Info screen.



Escape

Clothes

Always wear clothes appropriate for your job and the home where you are working. However, your clothes should also help you escape a dangerous situation.

For example, always wear shoes that allow you to run to a safer place.



Information Screens

Info screens fit on a 12" monitor/LCD, measured diagonally, but the area for text is much smaller. Of course, cTRAIN screens work well on larger displays, settling in the middle of the display. The picture above is a little smaller than a 12 inch screen. The bottom of every screen has a "navigation bar," the top of every screen has a headline ("Escape," above), and the left side of each screen has an area for a subhead ("Clothes," above). This limits the area available for text. The

addition of a picture, the icon for a movie or a popup picture further limits the space for text. This is to a degree purposeful. Limit your text to as much as you can fit on a single page in Hoeffler 24 in your word processing document with standard margins of 1" top and bottom and 1.25" left and right.

Pictures and Movies

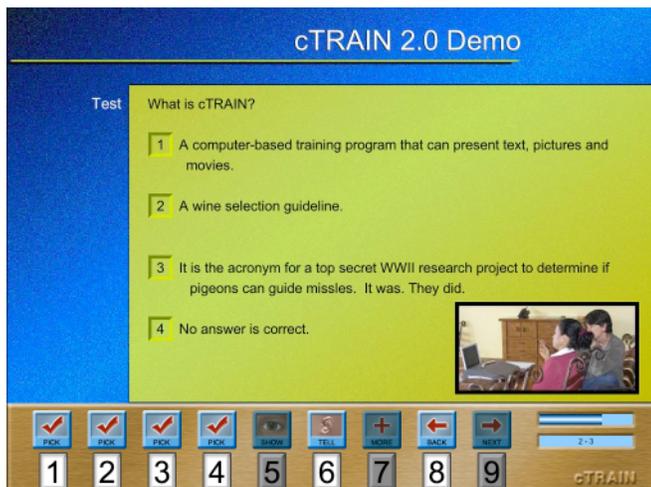
Pictures must be sized in a graphics program (png or jpg are good format options). The size they appear when pasting into a word processing program is a rough guide to the size they will appear on screen, but trial and error is inevitable. Movies must be in QuickTime format. A large picture that covers most of the screen can be used through cTRAIN's "popup" option.

Quiz Screens

Quiz screens resemble Info screens except they have a multiple choice question. The question shown in the picture to the left has 4 answers, but you can use only 3 or 2 answers as well. For students with limited formal education, we recommend only two answers.

Movie & popup icon

To present a movie or a large "popup" picture, the "show" option (Spanish version shown below) appears on screen (it is about the size shown below). The student presses 7 to show the movie/popup, and then pressing 7 again removes the picture. This means you have to leave room on the screen for only the icon shown below.



Producing cTRAIN projects—"How to" steps are described with sample pictures of screens and tips on development	You can develop your own content	NwETA can develop training content for you	Maintain your content on an NwETA server (2009)
	Use any word processor program for content development	NwETA content developers can visit your site and interview your staff	NETA can deliver content for your organization from our servers (2009)
	NwETA's editing program creates cTRAIN programs	NwETA can take pictures & movies to illustrate text	cTRAIN copyrighted by & licensed from OHSU*
	NwETA provides a cTRAIN program to you	NwETA delivers training on CD or web download	* Oregon Health & Science University



9BUTTON

The 9BUTTON unit (pictured) is recommended for training people with limited formal education or limited computer experience. The unit fits over laptop keyboards or in front of any display, replacing the keyboard. The 9BUTTON is optional; you can use the keyboard (runs on Win XP and Mac X only).

cTRAIN runs on modern Windows (2000, ME, XP, Vista) and Macintosh (10.4 and up) operating systems.

Contact - more information

<http://www.NwETA.com>

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