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10 IDEAS TO OPTIMIZE ONLINE TRAINING AND MAXIMIZE IMPACT

A Research Bulletin by:

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eLeaP™ Learning Management System (LMS/LCMS) is a complete, secure, web-based training and e-learning solution that employs a simple and intuitive user interface. This way both technical and non-technical training managers can easily create, manage, and track interactive training courses and learning programs for all levels of users.

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What does it take to make online training effective? That's a tough question to answer. To attempt an answer, we have to look at traditional classroom training methods and what elements make them effective. Is it eye contact with the instructor? Interacting with other students? Asking questions and getting immediate answers? There may not be a single answer. For the most part, educators are still to try to work out these factors and how they impact learning.

If we agree that training, by definition, is a process meant to alter actual behavior in some way, through increased understanding or new ways of addressing a process, then we must look at the outcome. Are the desired outcomes different in training a forklift operator in safety rules, for example, using online, self-directed delivery methods than in the classroom? Not likely. We want the forklift operated safely and effectively regardless of how the training is delivered. The goal doesn't change with the delivery method.

Is classroom training better than online training? For some, perhaps. But it seems that online training is expanding rapidly¹, so one has to assume that the process has validity. Still, there's no denying the perception that the two methods are significantly different.

Consider this: The goals and outcomes of every learning method are the same. The learners are most likely the same and, in most cases, the instructors or instructional designers are the same. What's different? The only difference we at **eLeaP** (www.eleapsoftware.com) can identify is the delivery method.

That change, however, is quite radical. Riding in an airplane is quite different than walking, yet they both can get you there. The difference? We call it *technology*. And with that change, we must address a host of new delivery processes for training and what we can do to make the outcomes equally effective...perhaps even better.

¹"The US market for Self-paced eLearning will reach \$16.7 billion in 2009 according to a new report by Ambient Insight called, "The US Market for Self-paced eLearning Products and Services: 2009-2014 Forecast and Analysis." The demand for online training is growing by 7.4% and revenues will reach \$23.8 billion by 2014."


What follows, then, are a number of ways (10 to be precise) that you can use to make your online training more effective.

1. Understand your subject.

You don't have to be an expert, just informed well enough to know the key points of what you are delivering. To put it simply, you should know what points are important and what you can consider secondary.

You also need good material. It must be accurate, up-to-date and easily explained. Typically, the raw material for the training is given to us by subject matter experts for whom we are developing the training. However, this does not relieve you of the responsibility of understanding it. You have to do some research. You have to learn to break down the concepts in terms that you can understand so that you are sure you can pass it along.

Once you have gathered the research and reviewed the material given to you, it's time to check your knowledge and time to review how you will break it out. Probably the best way to do this is by creating a storyboard. A storyboard is an outline of the material you intend to produce, typically done page by page. There are many different ways to create a storyboard, but perhaps the most common is a method that looks similar to a cartoon strip. Each box represents a slide, page or segment.

Introduction Table of contents Subject of course Logo.....logo.....logo	Objectives Learning 1 _____ 2 _____	Definitions Term Term	Features and Functions Copy Copy 
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Some developers prefer cutouts so they can be easily reordered as needed. The cutouts are then tacked to a cork board strip or tack-glued to a segment of poster board or Styrofoam. This is how the process gets its name.

The storyboard also functions as a way of reviewing the material with your client or the individual you are developing the content for. Visualization helps many to get a clearer

idea of what the project will look like when it's finished. And...it's always better to have an early review so that you and the client are sure you are on the same track.

2. Leverage the knowledge of a Subject Matter Expert (SME).

A subject matter expert brings accurate, up-to-date technical information to the training. This is a fundamental means to ensure the validity of the material and to gain (or not lose) the learner's confidence.

For the external client, you may have to enlist one of its personnel as your primary source of information. If you work in a corporate environment, you will most likely turn to the individual that provided the assignment or will use the training. Either way, be sure that the person understands his/her part in the development of the training...that is, providing the technical information needed to create the course.

At this point, you won't have much on your storyboard but it's ok to go ahead and use it as a guide. Bring it to your first meeting with the SME. If possible you should list the material you'll need and the format you would prefer to receive it in. In meeting with your SME, explain how your process works. If at all possible, develop a timeline together so that you are both in sync.

Once you have some documents prepared by the SME to work with, you will obviously need some time to go over it carefully. Organize the material and determine how it will be parsed into segments. You have already done some research on the topic, so all you have to do now is refine your outline with the detail you have and post it to the storyboard. This will become the foundation for everything that follows.

3. Capture and hold the learners' interest

Most instructional designers use a standard for both the length of the module and the length of each slide or segment. The **eLeaP** team recommends that modules stay within 30 minutes, avoiding information overload and improving retention. Even if the course is much longer than 30 minutes, it is still best to divide it into shorter segments to enable a clear, logical break point.

If you are using PowerPoint or a similar presentation program, try to keep the slides to short bites of two minutes, more or less. Doing so helps avoid boredom, since slides are changing fairly often. Use the guideline of keeping each slide to no more than one thought or concept. It's ok to let it run over several slides but including two ideas on one slide just becomes confusing...and, it's much more difficult to find the material for review.

Similarly, don't overload the slides with detail. Instead, keep the slides to three to five key points and use audio to expand them. Keep the points brief, touching only on the key words. You won't need full sentences. This is a good discipline for any presentation, but essential for an e-Learning program.

Including animation and graphics helps break up the material, letting some air, so to speak, into the presentation and keeping it from getting too dense. If you have ever encountered a paragraph in a text book that seems to go on forever, you know what we mean. One of the most significant benefits of e-Learning is the student's ability to stop at virtually any point and begin again. If the material is so dense that it requires close reading, we've defeated one of the best features of e-Learning and might as well put the material in a .pdf file. We will discuss some other methods that work well in holding the learner's interest a little further on in this paper.

Finally, an excellent way to hold the learner's attention is to avoid complex sentence structures and long words with many syllables in the audio or other expanded portion of your presentation. We're not suggesting "dumbing it down," but simply that the electronic media is best leveraged in as conversational a manner as possible. Use words and sentences just as you would in talking to someone, or explaining an idea to someone not totally familiar with the subject.

Example

Complex: "The goal of entering an alliance should be to find sustainable congruencies capable yielding extended, long-term mutual benefits."

Simple: "Marriage pays off in the long run."

4. Present materials graphically

You are most likely familiar with the expression "A picture is worth a thousand words." In e-learning it may be a graphic, an image, a drawing or something similar, that when used

properly is often much better than trying to explain a concept in words alone. It's a process more akin to "show me" than to "tell me," although used properly, both can work well together.

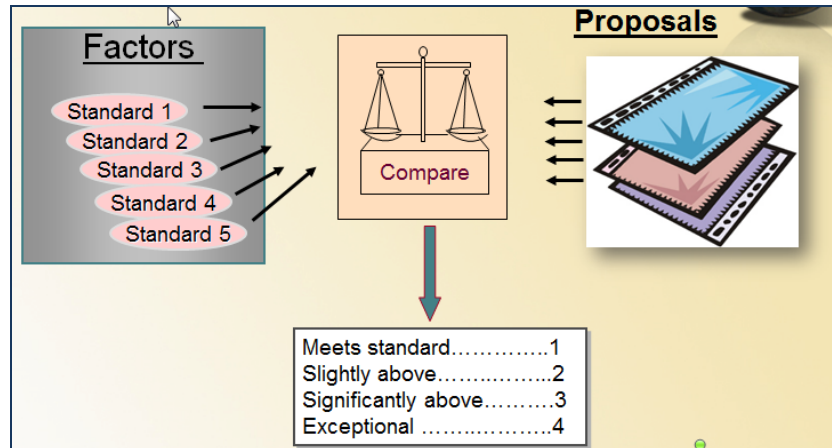
This brings up the subject of clip art. When do we use clip art and what kind should we include? If you consider that graphical elements are used to add information that the learner can use, then you can see why cutesy cartoons are generally somewhat inappropriate.

Before using any clip art, ask the question: How does this add value to the point I'm trying to make? Is it part of the "show me" element in your program? Which of these two examples makes the most sense if the topic is creating a vegetable garden?



Visuals should be simple and to the point. The photo on the right, above, illustrates a planting technique; no commentary or interpretation required. "Plant the seedling in a hole big enough to accommodate it." This is very clear and capable of standing on its own.

Graphics are also useful to replace selected text elements with a somewhat less complex element, especially when dealing with processes. The example below explains and illustrates a relatively complex process in an easy-to-understand graphic. In fact, it is a summary of the six slides preceding it.



5. Engage the learner

Developing interactivity between the learner and the courseware is another very useful method for optimizing your training. The most common form of interactivity is the quiz. Quizzes are easy to create and a very good tool for engaging the learner. It's also useful as a review method, to help ensure that the learner is getting the key points in the lesson. The **eLeaP** system, for example, contains five different quiz formats; it also allows for the import of third party quizzes that are SCORM compliant. The different formats are useful in breaking the monotony associated with using the same type of question format (e.g., multiple choice) over and over again.

Using a whiteboard or having chat capability is another very useful tool for engaging the learner. These allow the student to interact in real time with the instructor...asking questions, providing illustrations and so on. Many instructors hold "office hours" just for this purpose. It's a set-aside regular time when the instructor is online and available for learners' questions.

Including web pages and web safaris (where web-based content becomes part of the course) provides another level of interactivity. If you are using PowerPoint, you might consider the Live Web add-in (<http://skp.mvps.org/index.html>) that actually embeds the latest version of the site you are using right into the PowerPoint slide. This ensures that the latest update to that web site is shown as an illustration. The best part is that it's free.

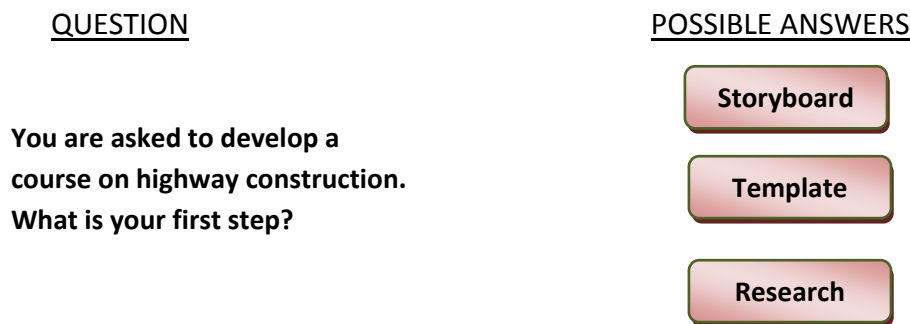
Finally, some instructors use the case study analysis as a method for building interactivity into their courses. The typical case study presents a situation which describes a problem or series of problems related to the course subject that require identification. Once the problem is

identified, the learner is asked to provide a recommendation for its resolution. This is submitted to the instructor for comment or, when appropriate, grading. The student benefits from this process by having to apply the learning to a situation that requires actually using the knowledge delivered by the course. The student also benefits from the instructor's feedback when the case study is returned.

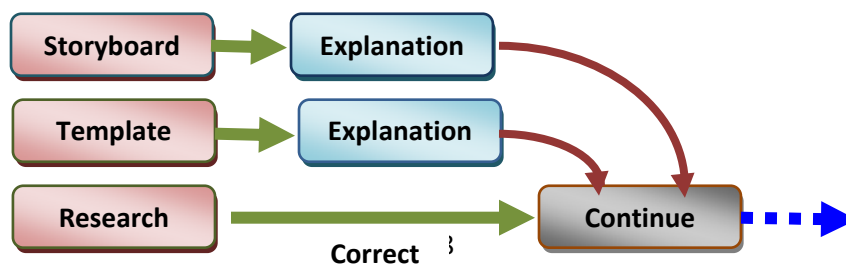
6. Use the branching technique

Branching can be a simple technique or it can be the basis for a highly complex scenario, depending upon how you want to use it. In its simplest form, branching is used with a quiz to direct the user back to the source material if the question is answered incorrectly. If the learner answers the question correctly, the program will open the next slide. This branching is typically accomplished by using a hyperlink to the slide or page, a common feature of most quiz engines.

A more complex branching application is contained in the following example that calls for making a decision:



In this scenario, there are three choices given. Only one is correct. When the learner selects the correct answer he/she continues with the course. If the learner selects the wrong answer, he/she is given an explanation of why it was wrong and then returns to the course. Here's how that looks in a flow chart:



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Each incorrect choice is also hyperlinked to the location of its correct explanation; for example, in PowerPoint the hyperlink would go to another slide and then back to the course. Obviously, if the correct answer is provided, the learner continues on with the course. This is a relatively simple branching exercise; they can be as complex as the situation calls for.

7. Provide relevant examples in a situational context

An example or question framed in a particular situation is used when a decision making exercise is appropriate. This type of question then branches out into a number of possible answers, very similar to the branching technique just outlined. What makes it different is its complexity.

Analyzing the situation in some detail is typically required before the learner can correctly identify and solve the problem, just as with a case study analysis. The situation is directly related to the course's subject (and job-related) and is one that has a correct answer. Here's an example:

“You are assigned as Project Manager to the renovation of a remote company installation. You awarded the master contract to a local construction firm that provided the lowest bid. Overall, the contract payments will total \$2.1 million. The contract calls for progress payments based on the amount of work that has been completed.

Now the contractor is asking for an exception to the payment schedule because his painting subcontractor has no cash and cannot purchase materials or hire painters. The sub needs \$150,000 to get started. Once the painting is done, the contractor will be at 85% completion; however, the contractor has already received \$1.9 million.

Within the scope of your authority, what would you recommend?

1. Provide the advance as requested
2. Terminate the contract
3. Hire your own painting subcontractor
4. Purchase the materials and pay the workers for the subcontractor
5. Have the contractor purchase the materials and pay the workers using your advance payment

6. Refuse to provide an advance and let the contractor deal with the problem”

To answer the question correctly, the student must first do the math to understand the current payment condition, then assess the risk factors in each of the choices and work within the *assumed* language of the contract. In most cases, the instructor will ask for an explanation from the student for the choice. This can then be critiqued while the student continues with the course.

8. **Provide “how to” simulations for hands on training**

Simulations in e-learning provide the learner with a demonstration of the process or technique that the course addresses. It then provides an opportunity for the student to gain experience by actually performing the required steps. For example, if presenting a new software program, the simulation will walk the student through the process, first explaining the basics such as navigation through the program’s various elements, and then moving on to a demonstration of how the program produces the results for which it was installed.

This process often uses programs such as Captivate or Camtasia to capture the course developer’s on screen movements, such as directing the mouse, filling in a required field or clicking on an icon to access another screen. Typically, the process uses a branching technique similar to the one we described earlier. When the learner performs as required, the simulation provides a “correct” message and then continues with the course. If the answer is incorrect, the learner is provided with the correct answer and perhaps given another opportunity to do it correctly.

These programs save the simulations in a video format such as Flash, AVI or a self-executing program that can be delivered to the learner with relative ease. Most are stand alone and require only commonly installed software. Most can be embedded in other program such as PowerPoint or several common e-learning authoring tools. Interestingly, PowerPoint slides and similar video presentations can be put right into the simulation as well.

9. **Avoid complex and confusing navigation options**

In order to maintain its effectiveness, e-learning courses should use simple, easily understood navigations techniques. Complex systems are not only difficult to learn, they can actually

detract from the learning process. We want the student to focus on the training material, not the process of accessing it.

Generally speaking, the format of most current e-Learning versions (such as **eLeaP**) has simplified the navigation to a relatively standard process. We find several common methods for navigation: Navigation through menus, navigations through video play bars and navigations through hyperlinks. In many older formats, the learner has been required to navigate back to a home page in order to move forward again. Often, quizzes were included in separate programs; today they are integrated with the rest of the course material. And many of the up-to-date e-learning programs also include features such as remembering where the student left the program and returning to that point when the student logs back in. So if you are developing a customized program, you will want to work closely with the developer to ensure smooth sailing for the learner.

10. Select the right delivery and tracking system

Today, there are literally hundreds of Learning Management Systems (LMS) and Learning Content Management Systems (LCMS) on the market. Most are fully scalable and can be delivered to as many learners as the user requires. Scalability affects not only the total number of users in the system but how many can access it at once, an important consideration if you are serving a large organization or group. The **eLeaP** system, for example, is fully scalable.

There are a number of other important features that enhance the LMS, including ease of operation for both the author and the student, built in quizzes and other interactivities, and full tracking. Reliability, too, plays an important role. On-demand training means exactly that: The training must be available at all times, 24/7. We also want a system that can be easily configured to meet our needs, without expensive programming. And, importantly, we want a system that won't break the bank so that courses can be offered to students at reasonable prices. Let's briefly examine some of these important features:

Ease of use and operation is one of the more important requirements of any training method. How quickly can courses be loaded or updated? How easy is it for the student to track progress, sign up for new courses, make payment or contact the instructor? As an illustration of a state-of-the-art LMS, the **eLeaP** LMS can be configured and operational in under 10 minutes, with courses ready to deliver in 24 hours. Students need very little or no training at all to begin using the system; students and instructors can access progress reports with just a few clicks.

Navigation is largely intuitive so there's a very short learning curve for learners, authors and administrators.

Many of the best systems today offer Software-as-a-Solution (SaaS) web-based programs so there's no client software requirements. **eLeaP** is a perfect model. It's available for use 24x7 and can be accessed from anywhere using a common browser such as Internet Explorer or Firefox. It is user customizable and contains a robust tracking and reporting system. This LMS completely eliminates the need for hardware, software or IT staff. But it is also secure, with solid access rules and a protective firewall. It also offers a pay-as-you-go financing structure, with prices starting at \$125 per month.

Content authoring is also an important consideration for selecting the right LMS. Many systems have built in authoring tools, while others simply import the content. Systems available today use very simple applications for course creation and administration. Most of them can be learned in a matter of hours. If it takes any longer than that to learn to operate and administer, you might want to reconsider your choice. Importantly, a well-functioning LMS should be able to import graphics and video to add to the variety that holds students interest.

Finally, as long as content can be uploaded or downloaded using SCORM (Shareable Content Object Mode...a set of programming instructions) compliant processes, all material should be easily interchangeable. **eLeaP** uses the latest version – SCORM 2004 – for its system which can easily handle highly personalized training. This ensures that virtually all course content and interactions can be saved in a standard format if it is not being used at the current time.

Summary

Some of the key points we've touched on in this paper included how to effectively capture learners' interest, keep them engaged and able to apply the knowledge they've acquired through job-specific scenarios. We explored various forms of interactivity, including branching exercises, simulations, situational studies, quizzes and more. We covered the use of Subject Matter Experts and author research in developing the technical approach to any training. And we examined some of the more important features of the Learning Management System.

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