Learning Delivery Systems

Companies that are interested in moving from instructor-led training to an online, self-paced e-Learning format may benefit from this review of the concepts important to such a move. This document contains information to help in the planning process for moving to web-based training and using an agile development system for the creation of an initial prototype or proof-of-concept version.

There are a number of benefits to technology-based training. The training is self-paced, highly interactive, results in increased retention and has reduced student and instructor or technical resource costs. The content is consistent and easy to maintain and distribute; perhaps the single most important benefit to companies providing training. Access is available anytime and from anywhere in the world and robust solutions incorporate informative and entertaining content types, access to subject mentors and an expanded library of relevant information. Per-student equipment costs disappear altogether and student tracking becomes automatic and easy with data being automatically tracked on the server. One additional benefit is that students are able to "repeat the course" as needed to refresh their skills.   The downside is that it must be far better planned and more complete as there is no instructor standing over the students to "wing-it." The effort to put this kind of training together is different and often greater than the effort to do instructor-led training, however the benefits of good online training generally far outweigh alternative methods of instruction – in even though they require a better up-front effort.

Traditionally e-Learning systems include the following key components.

1. The **training delivery interface (TDI)** provides both the navigable container for training materials and related content (including access to external resources), and other instructional assets like student interaction points, quizzing, result tracking, and access to human resources available to students (for example so they may email an instructor to ask a question). The "course builder" constructs the course flow in the "TDI Editor" and students view and interact with the course through the "TDI Presenter."

2. A **training administration module (TAM)** allows students to create an account (with password) through which they will access authorized training. This module includes an administrator account that establishes student access and sets appropriate permissions. The TAM connects the appropriate TDI(s) to each student account. The TAM can be created by the organization directly, or by the course builder. Typically the TAM passes information to the TDI (for example: student name, course number and name, date and time data, etc.) deemed important to the training organization.

3. A **training management module (TMM)** allows the organization to define data to be reported about the student's activities (including testing results). The TMM influences what will be tracked through the TDI to ensure the delivered training provides all the answers sought by the organization.

TheCourseBuilder's _Mosaic_ TDI

Good online training depends on an intuitive "training delivery interface" that does a good job of organizing course materials and tracking user interactions or results. It should be able to rapidly incorporate many different types of content (text, images, video, SWF files, animations, narrations, demos, hyperlinked directories, software simulations), and mix them together effectively, sometimes on the same page. It must visually support the flow of chapters or sections and allow multiple "pages" or full presentations within each section. Our customizable TDI (The Mosaic TDI) is a robust training delivery interface. Standard features include:

- A variety of content types can be "assembled" in the Mosaic TDI. Typically these are organized as chapters or sections with multiple content types allowed within any section. The Mosaic TDI is a unifying platform where all courses are organized and behave in a similar way to aid intuitive learning. The Mosaic TDI provides a clean and elegant Flash interface to underlying XML. In both areas, this provides for an amazing level of customization.

- When course content is limited to text, images or quizzes, content can be created directly through the TDI. When motion-oriented content is used (Captivate, Articulate, Camtasia, Flash SWF movies, video, animations, standalone narration, etc., this content is developed outside of the TDI and loaded as appropriate. The Mosaic TDI can be constructed directly through XML files or a Mosaic Flash-based Editor can be added to the project to provide a GUI interface for building content.

- Additional or related content (like narrations or simulations) reveal iconically and dynamically to "show when they should be present" to reflect content options and behaviors. The course builder may set default settings (for example automatic or manual) to support different types of learners or students themselves can set preferences if you will take advantage of the Mosaic TAM.

- The Mosaic TDI includes student evaluation of the course and any other survey questions you wish to include

- Though the interface runs through a Web browser (Internet or Intranet) the Mosaic TDI's appearance is like a desktop application, providing far greater functionality and customization than HTML. A prototype of one TDI design is shown on the next page.

The Mosaic TAM

The Mosaic Training Administration Module provides a PHP interface for students to create a student account. Based on privileges determined by the site administrator, students gain access to their authorized Mosaic TDIs.   As the course is begun, a private area is created to track all the interactions from the student. In the Mosaic TAM this includes account creation, each login with details about how long they remain logged in (by section) and where they left off. It includes all answers to quizzes, and all "Ask a Question" emails sent to instructors. Your organization can take over this entire process and we can send an XML document with student data to an external application for compilation and analysis. In this case, your application will pass student and course ID information to the relevant TDI.

The Mosaic TMM

The Mosaic Training Management Module specifies data to be tracked and constructs reporting details. The TMM influences what will be tracked through the TDI to ensure delivered training provides the results of training required by the organization.   In an instructor-led environment, it is far more difficult to assess what the student really understands throughout a course, and the capture of well-designed quizzes can significantly improve the organization's ability to assess effectiveness. The TMM cannot report on information external to Mosaic tools.

Instructional Candidates – For and Against – e-Learning Solutions

There are challenges when converting instructor-led training (typically a series of PowerPoint slides) to e-Learning. The first issue is that not all training is suited for an online environment. Obvious considerations here are when the student is required to use senses like touch or smell but less obvious are situations where

success requires judgment and feedback from an instructor. Often building online training programs requires an almost "from the ground up" approach that begins with realistic objectives for the self-paced course and a purposeful reworking of how information is presented to achieve those objectives. For sure there are enormous and continuous benefits of e-Learning and building an online course starting with a well-developed instructor-led course can move quickly, but it is important to understand that adding an audio track to a set of PowerPoint slides does not equate to training.

Determining the great candidates for online training is easier when you have an instructor-led course. If your instructor stands in front of a room and delivers the same content over and over with very little interaction (typically questions) from the students, you have an instant winner. You will still need to know (and cover) what is the delta between the information shown on the slide and the information discussed by the instructor, but this kind of "general information" can be extremely powerful in an e-Learning format (particularly when base knowledge is a prerequisite to understanding follow-on training). Both instructional staff and students will benefit from this as self-paced instruction. Surprisingly, good candidates are those where the instructor is constantly trying to draw or "act out" the missing content. E-Learning depends on visual representation of actions, and making the right investment to replace instructor sketching which poorly mimics this on a whiteboard, can make all the difference in an e-Learning success. Another good candidate for e-Learning is anytime you will show alternatives, like differences between products, configuration options and their results, etc. This is done visually so it is much better than an instructor can talk their way through.

So what are the "not so great candidates?" While there are likely great e-Learning components that can play into solutions, probably the most difficult areas to address with e-Learning are those where the entire meat of the discussion comes from the "breadth or depth" experience of a highly technical individual. Where you have a solutions-based product with endless choices, and an expert to advise "on the fly." the challenge to meet that level of delivery online becomes enormous. It is very difficult to provide the same value to students in an hour of dynamic consulting-oriented discussion (instructor-led), as you could potentially structure in an hour of self-paced instruction. That doesn't mean you can't use e-Learning – it just means you need a skilled moderator that can deliver alternatives on the fly after the more routine or base-level e-Learning portion has been completed. The idea here is that students benefit, not only from having their direct question answered, but from what they hear being questioned – and answered – by other students and the instructor. In this environment, the very best learning comes from having the instructor in the room to "stand and deliver" with alternatives documented and accessible in an e-Learning format.

Remember that one of the most significant benefits of e-Learning is that the course can remain available to the student as a refresher – something that is virtually impossible for instructor-led training. Both for partners (who may have spans of time between deployments) and employee or sales training that simply requires regular refreshers of updated information) making the investment in e-Learning keeps giving well beyond the initial course. From an "update" of rapidly changing information, the time commitment to edit or add new content to an e-Learning system is virtually the same as to edit or add new content to an instructor-led course. And when you factor in the costs of delivering all that printed content, you may well find yourself actually ahead of the game in terms of cost.

Getting Started

We are happy to work on either an hourly or fixed quote basis. Fixed-quote projects require a very detailed review of the existing material, an in-depth meeting with the client to assess the effort required to convert or enhance the existing materials, and the exploration of new needs to be supported by the Mosaic Training Delivery Interface (TDI) or other modules as required. This meeting will provide us with the information needed to develop the full project quote. Should you require a prototype to demonstrate a small amount of content, it will be created for a fixed-cost which will include a very basic Mosaic TDI and the conversion of a small amount of training content (not to exceed 20 pages). The basic TDI will be constructed using XML only (no editor will be developed in the prototype phase and no Training Administration Module or Training Management Module will be developed either).

Initial Project Plan – The Training Prototype

A Mosaic Learning System prototype by TheCourseBuilder.com includes the following:

1. Development of a basic Mosaic Training Delivery Interface (TDI). This TDI will include only the "TDI Presenter) which includes the software required to present XML data (or external rich content called through XML) through the Flash interface. It will not include a TDI editor. Editing tools are built only for complete projects. It will also not include a Mosaic Training Administration Module or Mosaic Training Management Module which are part of the complete project. If your organization has internal software to replace these modules, we will be happy to provide details that need to be passed as XML data to the TDI and reported via XML from the TDI.
2. Conversion of one Overview section from a current instructor-led training program to an e-Learning module.
3. Secure hosting on our server (for demonstration purposes). Complete projects can be maintained on our server or uploaded to your server.
4. Project assessment in preparation for a complete project plan, once the prototype "go-ahead" has been provided by your management. For this phase it will be important to have an understanding of the allocated budget for the entire project so that we may propose appropriate solutions that can be accomplished within the authorized funds. This allocation can either be based on the number of hours authorized per month or a fixed quote for the entire project.

For more information about a proof-of-concept prototype and the possibilities and power of a Mosaic Learning System by TheCourseBuilder.com, please call Kathy Vadasz at 408-705-1041.