

THE **e**LEARNING DEVELOPERS' JOURNAL

Strategies and Techniques for Designers,
Developers, and Managers of eLearning

JOURNAL™

THIS WEEK — DESIGN TECHNIQUES

Storyboards Tailored to You: Do-It-Yourself Magic Arrows

BY BILL BRANDON

"For sale: Magic arrow. Facilitates work and maximizes free time by allowing the user to communicate any intent and execute any action by drawing simple figures. It's based on the latest technology, and the magic arrow's user-friendly interface ensures success even by unskilled or naive operators. Only \$29.99. Money-back guarantee." (Don't you wish it were that easy?)

A magic arrow on a process flowchart gives the illusion of an integrated and automated transition, one that happens effortlessly. "Magic arrows" abound in instructional design. One of the important magic arrows in e-Learning is the storyboard, which transports a project from design to development — from the ethereal realm of problem-solving to the cold and cruel world of production.

A storyboard is to e-Learning design what a blueprint is to architecture. The storyboard provides the details from the designers that are needed by the developers in order to produce an e-Learning application on time and within budget. A common question among instructional designers seems to be, "Where can I get this magic arrow? I need a really good

template for my storyboards." In this article, I'll present some answers to the "magic arrow" question, and I'll give you some ideas that will help you build your own storyboards.

But first, some background

Much of the "process" in e-Learning development comes to us from the film and video world, as well as from software engineering and education. This common history with media design and production creates confusion at times. There are some common terms that are used in different ways, and not all of the lessons learned in producing other media apply to e-Learning. This is a serious enough issue to justify a bit of review.

Continued on next page

The handoff from design to production is one of the most critical transitions in e-Learning development, yet it is difficult to find ready-made tools to support it. The result is that work must often be re-done, budgets and schedules are missed, and sometimes the final product is not everything the designer intended. Storyboards are the "magic arrow" in this process, and the best storyboards are the ones you design for your situation. Read this article to find out what it takes to confidently move your design into production!

Extra Insights
on page 9

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The eLearning Developers' Journal™ is designed to serve the industry as a catalyst for innovation and as a vehicle for the dissemination of new and practical strategies and techniques for e-Learning designers, developers and managers. The **Journal** is not intended to be the definitive authority. Rather, it is intended to be a medium through which e-Learning practitioners can share their knowledge, expertise and experience with others for the general betterment of the industry.

As in any profession, there are many different perspectives about the best strategies, techniques and tools one can employ to accomplish a specific objective. This **Journal** will share these different perspectives and does not position any one as "the right way," but rather we position each article as "one of the right ways" for accomplishing a goal. We assume that readers will evaluate the merits of each article and use the ideas they contain in a manner appropriate for their specific situation. We encourage discussion and debate about articles and provide an Online Discussion board for each article.

The articles contained in the **Journal** are all written by people who are actively engaged in this profession at one level or another — not by paid journalists or writers. Submissions are always welcome at any time, as are suggestions for articles and future topics. To learn more about how to submit articles and/or ideas, please refer to the directions on our Web site: www.eLearningGuild.com.

DESIGN techniques

The Hollywood connection

In making movies, cartoons, and other visual media, a written script is the traditional way to specify the exact content. During preproduction, the storyboard is how writers and directors plan out the sequence of camera shots and connect them to the script. The storyboard usually consists of a series of sketches and notes on paper, covering the key shots in sequence.

The actual working practice varies. Alfred Hitchcock, a twentieth century director of psychological thrillers, used very exacting storyboards, so detailed (it is said) that scenes could be precisely shot even if he wasn't present on the set. There is a famous scene, the shower murder in "Psycho," that required dozens of individual shots, involving an actress and a stand-in, made over a period of several days. Hitchcock's graphic designer on the film, Saul Bass, drew each of those shots on a storyboard in advance. *That's planning!* Other directors seem to be products of the "back-of-an-envelope" or "cocktail napkin" school. The point is that all of them plan, and all of them rely on storyboards to communicate their ideas and vision to the rest of the production team. Very little is left to chance.

There are a number of common concerns that apply both to the film, video, and multimedia world and to e-Learning:

- Both involve production with a team.
- Both involve production of visual elements and audio.
- Mistakes in either one are expensive to fix.
- Creativity is important in both.

At the same time, there are important differences between other forms of media and e-Learning:

- Most multimedia and all video and film products are linear — one thing always follows another in a fixed sequence. But most e-Learning involves branching based on learner responses — so each learner may experience a different path through a course.
- Most multimedia and a lot of video and film is made for the purpose of creating awareness and interest via a clearly communicated message. e-Learning is created in order to obtain particular business goals as the result of people developing new skills or knowledge.
- Most multimedia and all video and film products are non-interactive (or only minimally interactive). e-Learning is defined by questions, interactivity, and practice.

In both cases, the storyboard is a focal

point, a translation or transition from the language of problem definition to the language of problem solution, from creative vision to technical expertise. The storyboard provides a communication channel between the various disciplines contributing to the final product. This is significant in the case of e-Learning because at least three disciplines are involved: instructional design, graphic design, and technology.

The e-Learning storyboard

Because storyboards are more useful for educational content than scripts, e-Learning designers have adapted and refined the idea to suit their particular needs. Where a moviemaker's work results in a fixed sequence of images, e-Learning usually involves branching and interactivity and so e-Learning storyboards must connect not only content and images but also programming instructions.

In their excellent training strategy document, the U.S. Department of Justice Office for Domestic Preparedness says, "Storyboards are the blueprints of an interactive courseware design and development process. They provide a combination of text and graphics or graphic descriptions that convey all the necessary information about the delivery of course content. Storyboards describe in detail all images, animations, movie segments, sound, text and navigational paths. The more complete, detailed, and accurate they are, the fewer the assumptions, questions, delays, confusion, and errors that occur later, during the costly Development phase. An accurate content outline, course design document, and style guide are essential to the success of the storyboard design." (The complete training strategy document is available on the Web at <http://www.ojp.usdoj.gov/odp/blendedlearning/odp.htm>.)

What can you do with a storyboard? Storyboards are important to production of effective e-Learning for several reasons. First, the storyboard documents the e-Learning design completely. Also, the brainstorming that often accompanies work on a storyboard may assist the creative process and result in a better design. Storyboards provide an important basis for project management, control, and communication. A storyboard can facilitate training of e-Learning novices, provide support for standards, and make it possible to achieve consistent "look and feel" across an organization's e-Learning products.

Where the storyboard fits in the production process

The design process leading up to creation of the storyboard has several steps, each one meant to reduce the possibility of mistakes or to preserve the integrity and value of the e-Learning design. (See Figure 1, below.) These steps have been addressed in two of my previous articles in **The Journal**. The first four steps (Priority Needs, Job Objectives, Task Analysis, and Methods and Tools), were covered in "How to Connect e-Learning to Business Objectives" (April 12, 2004). "How to Build Composite Learning Progressions Using Approximations" (December 16, 2002) showed a method for moving from the initial analysis to create the Learning Objectives and the Learning Progression.

To review very briefly, after identification of priority business needs, the e-Learning designer will have named the job objectives (outcomes or accomplishments) required to resolve those needs. By task analyzing the outcomes — breaking down into steps what a performer must do in order to accomplish each outcome — and by listing the appropriate methods and the available tools, the designer identifies the approximations that will help the learners develop the needed skills in a learning setting. At this point, the formal learning objectives can be defined and organized into progressions. The designer can then create a flowchart to set up the sequence of learning activities. The next step is to create draft storyboards that can provide a basis for reviewing the course plan with subject matter experts. Once reviewed, the draft storyboards can be transformed into production storyboards that will guide the developers. These production

storyboards also serve as a checklist for the final summative evaluation before release.

Storyboards are not always part of the design and development process. If your approach involves applying a rapid prototyping technique, you likely won't be storyboarding because the emphasis is on getting prototypes developed as soon as possible and iterating the process. However, in almost any other situation, especially when using systematic instructional development processes such as ADDIE (Analyze — Design — Develop — Implement — Evaluate) (see <http://ed.isu.edu/addie/Research//Research.html>) or structured delivery models, such as ROPES (Relate — Overview — Present — Exercise — Summarize) (see http://business.baylor.edu/James_Moshinskie//ROPES.HTM), a storyboard should improve your process, facilitate production, and lower costs. It may not be a "magic arrow," but storyboarding works.

Could you borrow or buy a storyboard?

Storyboard formats and details always relate to a particular design methodology, and to particular e-Learning approaches and authoring tools. In some cases (perhaps a third of the time), there will be a storyboard template that someone else has developed and which will exactly fit your circumstances. Some of these are free, and some can be purchased. Finally, you may already own a tool that includes storyboard development among its features, or you may have the budget to buy such a tool. Let's look at some examples.

Freebies

Some templates are available on the Web at no charge. If you search the Web

using a keyword such as "storyboard," you will get many hits. That's the good news. The bad news is that most of these search results will relate to film, video, or multimedia and will not be useful for e-Learning work. So a search for "e-learning" on the results of the first search will reduce the clutter and still yield a large number of potential hits. You may also find that many of the templates posted on the Web claiming to be for e-Learning are not useful for your particular situation. They may be incomplete, they may be based on a model of learning that you disagree with, or they may have no learning model behind them at all. They may turn out to be suitable only for developing non-interactive PowerPoint presentations. Others won't work for networked teams where revision control is important. Many of the formats will only be suitable for frame-based e-Learning, which in turn is mainly suitable for declarative (factual) or canonical (right/wrong) knowledge.

There are some bright spots, though. Two of the best sources online provide solid templates at no charge.

Studio 1151

"Studio 1151" is an online guidebook maintained by Alan Levine at the Maricopa Center for Learning and Instruction. One section provides storyboard guidelines and examples. (<http://www.mcli.dist.maricopa.edu/authoring/studio/guidebook/storyboard.html>). The examples seem to have been designed for HyperCard stacks, but they still illustrate three useful formats. Another section of the site offers advice on flowcharting as well.

U.S. Department of Justice

Section 3.6.2.2.4 of the Office for

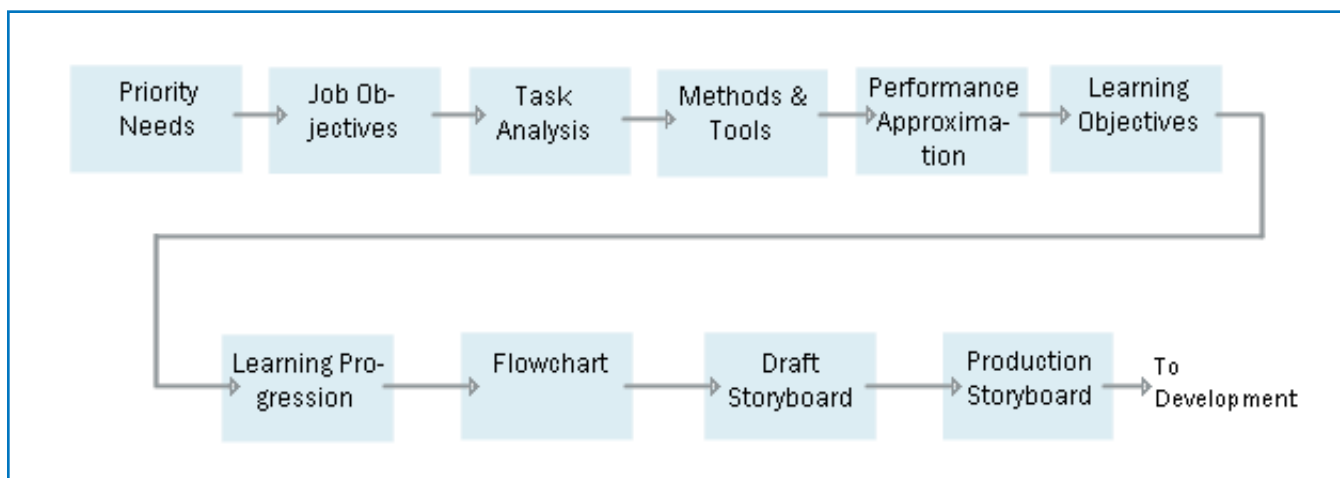


FIGURE 1 The instructional design process ends with creation of the production storyboard and handoff to the development team.

Domestic Preparedness, U. S. Department of Justice, training strategy document that I cited earlier in this article (<http://www.ojp.usdoj.gov/odp/blendedlearning/odp.htm>) offers three other useful formats and a great deal of detail that would be appropriate indoctrination material for individuals new to e-Learning design.

Templates you can buy

Among the results when you search the Web for “storyboards” will be a number of storyboard tools and templates offered for sale. Again, most of these will be for movie or video production purposes. A few will be useful for sketching out ideas graphically in storyboard fashion. A handful are designed for e-Learning, and of these there are two that are, in my opinion, most generally useful.

Horton e-Learning Templates

Most storyboard templates, as I mentioned, are really designed with the needs of frame- or screen-based e-Learning in mind. This is fine unless you are developing a simulation or an application where frames and screens are not involved. The only templates I have found that include options for applications that are not screen-based — i.e., for those

based on timelines, such as Flash movies — are in the Horton set. Actually, the Horton e-Learning Templates are a package of several dozen models, all based on a complete design methodology. The full set includes templates in your choice of Visio, PDF, or HTML formats for everything from basic PowerPoint presentations to learning objects. Many of these are also discussed in William Horton's book *Designing Web-Based Training*. Information and samples are at <http://www.designingwbt.com/index.htm>.

Designer's Edge

Designer's Edge is an e-Learning design application that has been around for several years. This is another product that delivers a complete design methodology, based on classic ISD. For this reason, experienced instructional designers sometimes feel that Designer's Edge is redundant, but teams that consist of new designers, or those with only a few projects under their belts, seem to like it. Designer's Edge includes a key part that creates actual storyboards.

Designer's Edge was originally intended for use with the authoring system Quest, but it can be used as a stand-alone product. To “kick-start” development, Designer's Edge storyboards can

be exported to HTML or Java templates, through use of another application called Net Synergy, or they can go directly into Quest. At various times in the past, Allen Communication Learning Services (or Mentergy) has offered utility applications that would export Designer's Edge data into Authorware and ToolBook, but these do not seem to be supported now. From time to time, individuals in user groups report that they are working on applications that will “translate” Designer's Edge data into file formats that authoring systems can use, but to date none of them have said they have been successful.

However, an extension from Mentergy is available for Designer's Edge Enterprise that allows Dreamweaver developers to access Designer's Edge project design information from within Dreamweaver. Designer's Edge also produces a number of reports that are useful to the project manager. One of those reports is an inventory of the assets identified in the storyboards (screens, movies, and other objects) that will have to be produced during development; this can be very helpful in refining your schedule and your budget. Designer's Edge is relatively expensive, but if your organization isn't too experienced, and is serious about

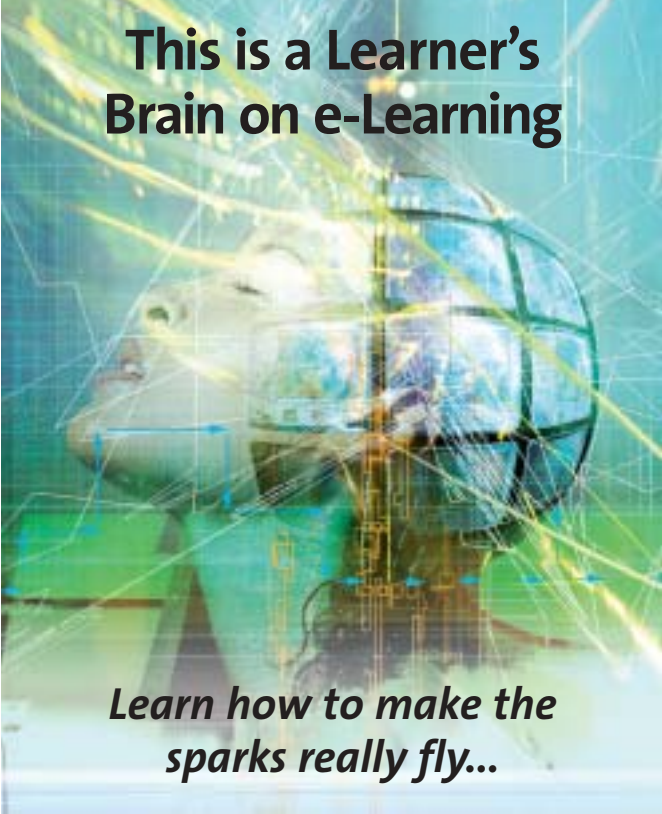
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applying a systematic approach to e-Learning design, there is nothing quite like it. Information is at <http://www.mentergy.com/mainmenu/?menuid=tools&subid=de>

Templates built into tools and LCMS

Learning content management systems (LCMSs) usually include a storyboard tool. In addition, traditional stand-alone authoring tools may also provide storyboarding capability. Some of these storyboarding applications are very complete, offering both graphics and text to commu-

nicate the designer's intent. Others only provide text based "storyboards" that are little more than an outline. These are not as effective as the ones that offer graphics.

What if these won't work for you?

A great deal of e-Learning authoring is done with tools such as PowerPoint, Microsoft Word, and Flash. It is possible that more e-Learning is created with these three, and with native Web applications (HTML, XHTML, DHTML, JavaScript, etc.), than is created with traditional authoring tools, LCMSs, and rapid devel-

opment tools. In these instances, designers must provide their own storyboards.

Designing your own storyboard

An effective storyboard will provide a robust hybrid of instructional design, graphic visualization, and software engineering features. In my opinion, the only way to get this is to build your own, using Word, Excel, Access, PowerPoint, or even HTML or Flash.

What goes into a storyboard

To be most useful, a storyboard must

TABLE 1 Typical storyboard organization

<i>These items are representative of the types of detail frequently included on storyboards for frame-based e-Learning.</i>	
Header section: Identifying information and administration details	
Item	Description
Date	Storyboard creation or latest revision date
Storyboard number	Unique number assigned to this screen or frame
Version	Version number; reflects number of SME review cycles
Revision	Revision number; reflects revisions between SME reviews
Writer	The designer or author of this storyboard
Reviewer	The person assigned to review the storyboard
Review date	The date the current storyboard was reviewed
Course title, number	Course title is the one that will appear on the course title screen. A unique number identifies the course to which this storyboard belongs.
Module title, number	Module title is the one that will appear on the module introduction screen. A unique number identifies the module within the course.
Lesson title, number	Lesson title is the one that will appear on the lesson introduction screen. A unique number identifies the lesson within the course.
Screen title, number	Screen title is the one that will appear on the screen itself. A unique number identifies the screen and its position within the lesson.
Display section: Instructional content seen or heard by the learner	
Item	Description
Monitor	Graphic showing what the learner sees on the monitor
Script/notes	Script for narration, notes for developer/programmer
Monitor image details	Where to find the graphic, if one exists
Logo/branding	Notes concerning use of logos or branding on this screen
Font, bullets, text position	Notes concerning typographic treatment
Navigation section: Options and instructions given to the learner	
Item	Description
Navigation controls	Indicate which controls are available and which screen each goes to
User instructions	Specific instructions to appear on screen for the learner
Interactivity section: How the learner and the application communicate; logic	
Item	Description
Rollovers	Location and text for any rollovers
Hot spots	Location and result for any hot spots on screen
Items and logic	Response items, right/wrong/none, and result of selection
Number of tries	How many tries does the learner get on the question
Feedback	Feedback for learner when maximum tries are exceeded, number of next screen

address all of the details included in the individual Web pages or screens. In turn, the authoring application and the nature of the e-Learning content itself will determine many of these details. An e-Learning storyboard integrates instructional methods and media elements in a graphical way. It documents the instructional sequence, text and narration, graphics, other audio and visual elements, learner interactions, and testing.

Table 1 on page 5 summarizes items that often appear in storyboards, particularly those that support frame-based e-Learning.

Storyboard content will tend to be different for each authoring tool used. PowerPoint storyboards can be very simple, while storyboards for Authorware may be complex. Some tools have more capability than others, e.g., regarding test types (drag-and-drop, fill-in-the-blank, hot objects and hot spots, multiple choice, true-false), and these features should be included on the storyboard template. Other differences will depend on the particular style of delivery chosen for a given e-Learning application: the storyboard for

a "slide show" format will provide features distinct from those of storyboards meant for use in designing demonstrations (for example, Camtasia captures), interactive lessons, or collaborative exercises.

However, the details will almost always include the navigation features found on the pages, the information content (text and graphics), the interaction features, and scripts for narration, animation, and video. Normally a storyboard also includes unique identification and other administrative information in the heading. It helps to organize the storyboard around these groups. Also, the storyboard should reflect key points in your organization's style guide for e-Learning applications, such as:

- Navigation: consistent throughout, button actions indicated, accessibility indicated, navigation and branching clearly indicated on each page.
- Text and layout style: type styles, bullet styles, text positioning
- Narration: audio script, including instructions and feedback, male/female narrator voices indicated.

- Interaction: Adequate description of interactions for developers to work with, prescriptive feedback for all quiz items and interactions, rollovers described including size and position, rollover text included, number of tries learner gets on each exercise or item, scoring and tracking instructions, clear instructions for the learners.

- Graphics: detailed descriptions and actual graphics, file names and locations, logo usage and colors, other branding specified

If you have accessed the Studio 1151 and Department of Justice sites mentioned earlier, you have seen how two organizations tackled the layout problem in different, but effective, ways. Another example of a customized storyboard appears below in this article ("Using your storyboards"). You may also find it helpful to develop your own style guide for storyboards, modeled on the one on the Department of Justice site.

Storyboard with the tools you know

There is no doubt that storyboarding on paper is a more fluid process than

e-Learning for e-Learning Professionals...

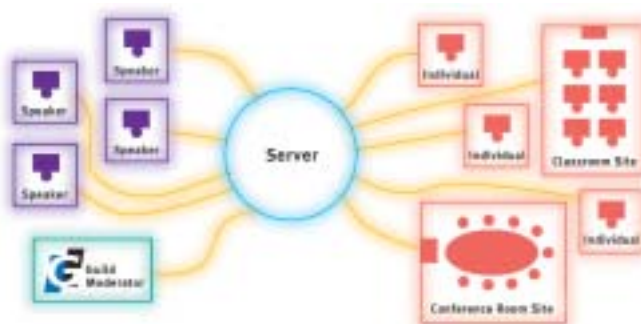
The eLearning Guild's ONLINE FORUM™ SERIES

The eLearning Guild has created *The Guild Online Forum Series*, a new series of online events that will be held throughout 2004. On the 2nd Thursday of every month (except January) you can register to participate as an individual, or as a group, in a one-day "virtual conference" that includes four highly interactive seventy-five minute sessions designed to explore a specific topic.

Here's how the Online Forums work:

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Here's a brief description of the next Online Forum in the series...

MAY 13, 2004

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Look at outsourcing from many angles. Examine when to outsource parts of the project, the entire project or perhaps even the entire e-Learning function. Discover the costs associated with outsourcing along with the ROI of outsourcing. Learn how to select and manage vendors. Discuss issues around both internal and external staffing.

Target Audience: This Online Forum is for anyone who is considering outsourcing parts or all of e-Learning projects or initiatives.

To learn more about each upcoming Online Forum and to register, go to:

www.eLearningGuild.com

storyboarding online, especially during the drafting stage. However, you should carefully consider whether your organization will use paper storyboard forms or electronic forms for the production storyboards. Paper forms are acceptable for small projects and for a local team that does not develop many courses each year, if you don't mind the housekeeping issues and a certain amount of inefficiency when it comes to revisions and to project management. In my opinion, electron-

ic forms are really mandatory for large projects and where the team is geographically spread out.

I cannot recommend strongly enough that the information contained in your storyboard about the images in your e-Learning application be in graphic form. Whether it's screenshots for software training, PowerPoint slides thrown together with clip art, sketches done with MS Paint, or hand drawings captured with a scanner etc, an image will communicate

the designer's intent and vision to the development and production team much more clearly.

If your e-Learning design involves branching, with prerequisite tests and lesson reviews instead of purely linear designs, PowerPoint won't be an ideal storyboarding application. You may find it necessary to execute your storyboard forms by using a relational database, HTML, or Flash.

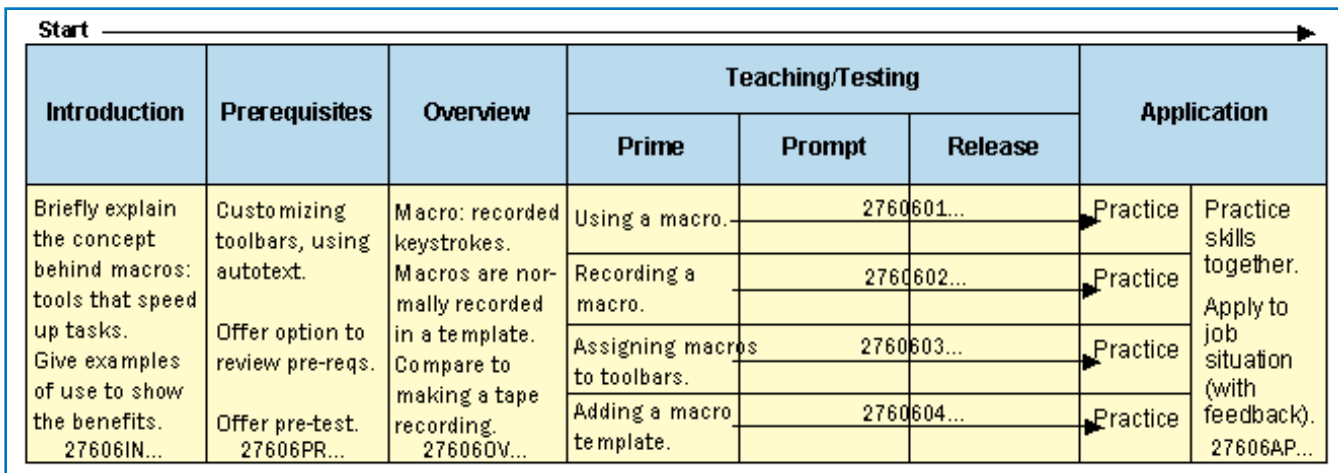


FIGURE 2 This is a learning progression chart for an e-Learning course. The numbers designate the sequence numbering for the storyboards (see Figure 3).

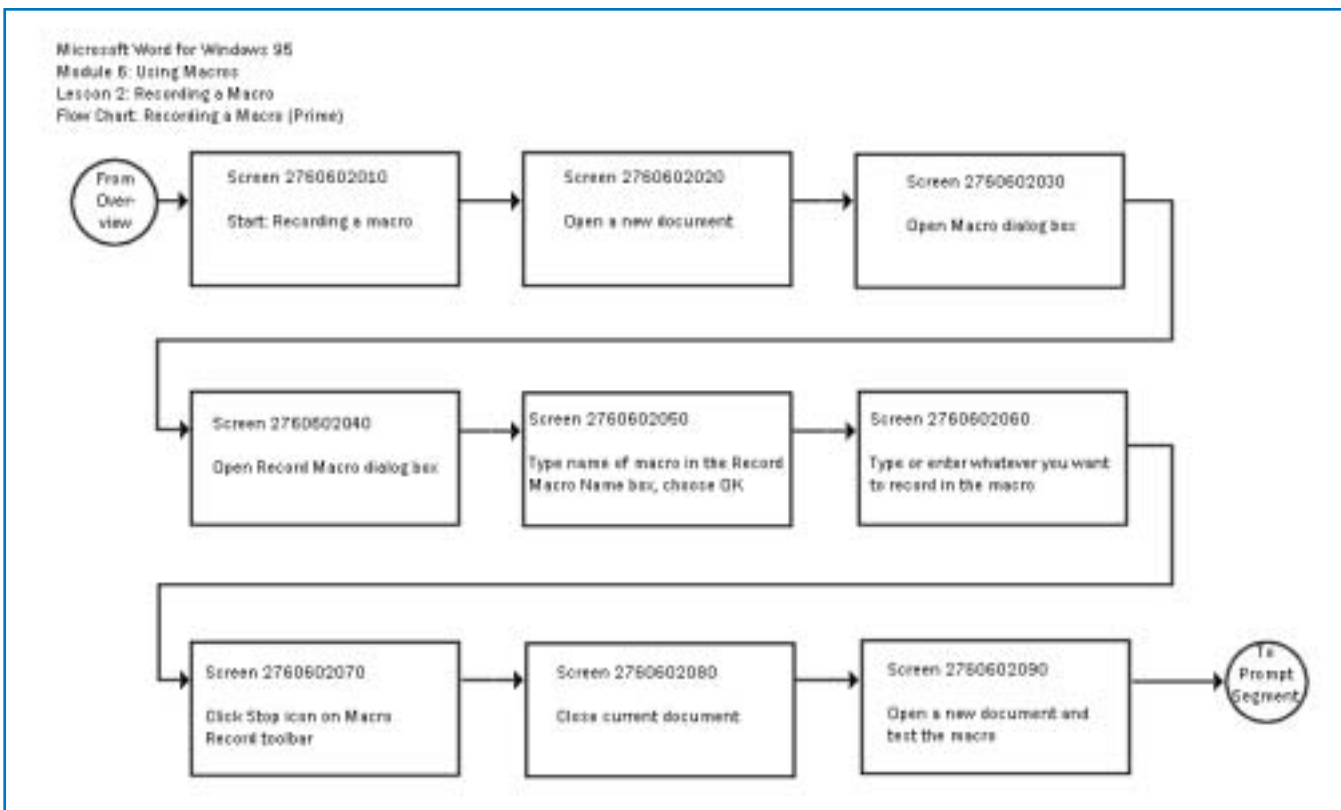


FIGURE 3 This is the flowchart for the Prime sequence of the "Recording a Macro" lesson in the course shown in Figure 2. Each item in the flowchart represents a screen, and a storyboard frame will be developed to deliver the content specified.

Using your storyboards

The entire design process needs to be completed before creating the storyboard. The designer will have identified the learning objectives and organized the content, established the instructional sequence, and defined the modules. (See Figure 2 on page 7.) Finally, the designer flowcharts, or at least models, the sequence and titles the various parts. (See Figure 3 on page 7.) In an interactive application, storyboards and flowcharts must work together. The flowchart helps the design team visualize the paths through the course, and makes sure there aren't any "dead ends."

Storyboarding should be an enjoyable process, and it should not be rushed. The more complete and accurate the storyboards, the smoother the development work will go later. If you finish the story-

boards and complete the review process before doing any actual production, you are far less likely to have to do any "re-work" of elements due to changes in sequence and content.

Storyboard development is frequently a two-step process. Start with simple rough sketches of the screens and grow these into a storyboard as the design solidifies. Initial storyboards should not be too "polished" — at the beginning of the process you're still brainstorming. The objective is to have complete, useful guides for the developers, artists, and voice talent. (See Figure 4, below.)

Numbering the screens and storyboards is an important consideration. The usual practice is to have a sequential system that assigns a number based on the screen's position in the course, module, and lesson. These systems will often


increment individual screen numbers by 10, so that additional screens can be inserted if necessary without requiring renumbering of large sections of the course.

Other details of Figure 4 follow the descriptions shown in Table 1.

A final consideration is the translation of the storyboard forms into electronic formats. At a minimum, saving the production forms as Word or Adobe Acrobat (PDF) documents will make it possible to maintain the information online, where all members of the team can access it easily. In some cases, it is worthwhile to convert the information into HTML or into a database. Leo Lucas wrote an article on using HTML for this purpose in the March 17, 2003 issue of *The Journal* ("Create Web-based Courses Faster With HTML-based Storyboards").

Conclusion

After the storyboard is completed, and before turnover to the development or production team, spell check and proof-read everything! Verify that the style and usage guidelines have been followed, especially for capitalization, punctuation, headings, and layout. See the March 2002 Journal article and accompanying checklist by Chris Frederick Willis, "Storyboards: Ready? Set? NO!" for a thorough guide to a smooth handoff.

Everyone wants to find a fast, reliable, and cheap "magic arrow" for the critical transitions in the e-Learning design and development process. We'd all like to be a "Hitchcock" in the e-Learning annals. Nobody likes the extra work and scope creep created when "the plan" is only sketched out on the back of an envelope. Building your own storyboard is the best way I know to have it all! 

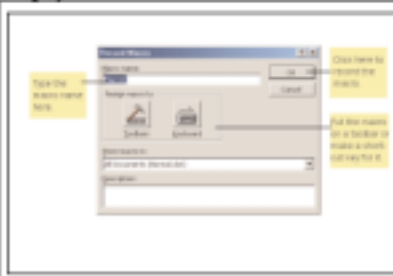
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Additional information on the topics covered in this article is also listed in the Guild Resource Directory.

Date	5/14/06	Storyboard #	2760602004	Version	1.0	Revision	1
Writer	Brandon	Reviewer	Brandon	Review Date	6/24/06		
Course	Microsoft Word Intermediate				Course #	276	
Module	Using Macros				Module #	6	
Lesson	Recording a Macro				Lesson #	2	
Screen	Open Record Macro dialog box				Screen #	4	

Display		Script/Notes
		<p>After you press Record on the Macro dialog box, the Record Macro dialog box appears.</p> <p>Using this dialog box, you can name, record, and store your macros for future use. You can also put your macros on Word's toolbar or you can give them keyboard shortcuts.</p> <p>Start by giving your new macro a name. A macro name can have up to 255 characters. Use only upper and lower case letters — no spaces or symbols. You can use numbers.</p> <p>We'll name our macro MyAddress.</p> <p>(Replace Macro in dialog with MyAddress.) (Place all callouts on screen when narration starts.)</p>
<p>Make Location: \capture\70102.gif</p> <p>Capture Graphic Movie Other</p> <p>Logo/Branding: per guidelines</p> <p>Font: Franklin Gothic Book</p> <p>Bullets:</p> <p>Text Position: Left</p>		

Navigation	
	2760602003 2760602005
User Instructions: Click the Forward button to continue.	

Interactivity	
Rollovers	None
Hot Spots	None
Items	R/W/N
1	
2	
3	
4	
5	
Tries	Feedback To Screen

Page 1 of 1 page

FIGURE 4 This is an example of a completed storyboard for one frame (or screen) of the e-Learning program in Figures 2 and 3.



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Interaction, Activities, and Learning

Engage learners meaningfully to develop mastery

Interaction is a pretty hot topic in our field and for good reason. Its importance for learning has been clearly documented in instructional research. Some of the most critical outcomes of interaction include feedback, motivation, and the ability to adapt content to a learner's needs.

If interactivity is considered an important measure of good online learning, the dilemma is that we often don't know what we're measuring, and that's a pretty slippery slope. To answer that question we first have to ask: Interaction for what? That's easy... Interaction that supports the desired learning. If the fundamental nature of learning is engagement in activity over time, as two significant teachers have convinced me, two of the words from that assertion hold important keys for what good interaction requires: activities and time.

Meaningful interactions

The design of *meaningful* interaction, for the purpose of learning, requires selecting activities that allow learners to practice doing what knowledgeable and experienced people DO with the content (in order to gain expertise and mastery — over time).

Too many online instructional materials contain limited or the

wrong types of activities, though. Most of the time when we design instruction, we need learners to be able to *use* the content, not just *recall* it. If we truly want learners to be able to use the content, we need to design instructional activities that involve learners in the types of activities that allow them to practice using the content as it is used in real-life situations, deal with increasingly complex uses of the content as a whole (not just the parts), and get meaningful feedback and necessary support along the way. That's a big charge, but that's what it takes. Recall activities are useful to assure understanding of simpler concepts, but often do not go far enough.

Activity types

The table below shows activities that are commonly used in online learning and support. The categorization reflects ways that these activities are commonly used in practice.

Research shows that transfer of learning is greatly enhanced when learning environments allow learners to experience real world complexity, with support. People don't learn as well by being fed information. They learn best by engaging in meaningful activity. The best activities are those that mirror the


way the content is used in the real world.

Example

Consider an online module on tools used for project management. Limited interactions that allow the user to see example project plans and Gantt charts improve learners' awareness of tools of the trade and how they are used. This is fine as a conceptual starting point. Even better is adding the ability to manipulate the tools by changing data and determining how that impacts deliverables. Then use the tools in cases to experience how different tools support different processes... now we're getting into real, real-life uses. Allow learners to use the tools and gain feedback, advice, and support on their own projects over time, and the learning environment begins to support real mastery.

The essential design question, when it comes to selecting activities (interactions) is the complexity of the learning task and the degree of skill that is desired... awareness, newbie, middle level, or expert? If you have a complex learning task (almost a given) and require more than awareness or newbie level of skill, the use of meaningful DO activities is needed.

Next time...

In this series of articles, I'll describe methods and tools for accomplishing a DO activity each time. We'll start on June 7 with how to accomplish hands-on practice. Think you need to spend a fortune building highly realistic simulations? If you're training folks to fly 757s or clean up hazardous waste spills, that makes sense. Otherwise, it's often overkill... better strategies can cost loads less. I believe I have some Ah Ha's in store for you. 

Online learning & support activity types

Recall activities

Quiz
Drill-and-practice
Simple animation
Presentation sequence
(text/graphics or slides/text)
One-way Webcast
Demo

Do activities

Hands-on practice
Tutorial
Simulation
Field work
Guided analysis
Case study
Virtual lab
Journaling/reflection
Discussion questions
Role play
Peer review/group critique
Brainstorming

Information and support

Glossary
Documentation
Decision tool
Demo
Help files
Knowledge bank
Resource list



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The Guild's unique and focused symposia drill into the most critical issues for e-Learning designers, developers, and managers. These are

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The eLearning Producer Conference, held in the fall each year, offers comprehensive and in-depth content for all e-Learning professionals in a collegial environment conducive to learning and sharing.

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If you attend a Guild event, you have immediate access to all event proceedings. If you do not attend, as a Guild Member you still have access to the proceedings 90 days after an event ends.

Guild e-Clips

A Guild Members-only publication sent by email every week. It's short, easy to read, and includes "clips" designed to keep members connected to the latest information about Guild publications, surveys & studies, and learning events.

eLearning Insider

The eLearning Insider is sent by email every other week and includes current e-Learning industry news, excerpts from Journal articles, highlights from Guild surveys, e-Musings, and information on Guild matters.

Professional Development Through Active Engagement

In order to maintain a vital community and provide relevant information, The eLearning Guild seeks the active involvement of all Guild Members and Guild Associates. Consider these ways to engage:

Speak at Guild Events: Members and Associates are encouraged to submit presentation proposals for any and all Guild events.

Write for the Journal: *The eLearning Developers' Journal* articles are written by industry leaders and practitioners just like you who are working in this field every day.

Join the Program Advisory Committee: This committee works to craft the program content of all events produced by the Guild.

Join the Research Advisory Committee: This committee works to identify the topics for Guild surveys and studies, and also develops the survey instruments.

The eLearning Guild organizes a variety of industry events focused on participant learning:

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