

15 Web site authoring tools

Despite their lofty educational pretensions, many e-learning courses at their heart are just special-purpose Web sites. Many are created by Web site authoring tools. Web site authoring tools build and link individual Web pages to create a Web site. They are the successors to the simple HTML page editors of several years ago. Most sport sophisticated capabilities to create and maintain complex sites of thousands of pages. Some let you create interactive animations and database connections without any programming.

Joining these veteran tools is a relatively new type of Web authoring tool called a *blog*. Blogs make creating ongoing Web journals simple enough for anyone.

On our tools framework, we put Web site authoring tools in the Create column, spanning both the Page and Lesson rows. They peek up into the course level, but lack the sophisticated collaboration and tracking capabilities needed to completely cover this square. However, with the database connections built into some of these tools, you can, with enough hard work and cleverness, extend the scope of these tools to cover courses and curricula.



Web site authoring tools do not work on their own. Their purpose is to create Web sites that are, in turn, offered by Web servers. To create these Web pages, they rely on media editors for the graphics, animations, and other media that appear. Sometimes they are used in conjunction with course authoring tools (and the course authoring capabilities of some offering tools) to prepare pages more efficiently than the Web site authoring tool can.

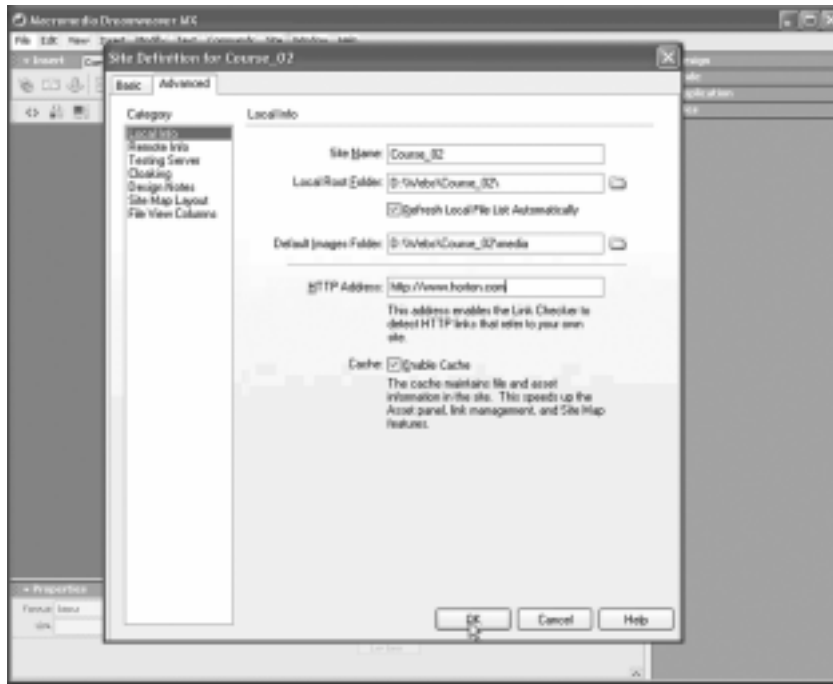
WHY CREATE E-LEARNING WITH WEB SITE TOOLS?

Your first reaction to this chapter might well have been, “This book is supposed to be about e-learning technology. Why would I be interested in Web site tools?” Before you fast-forward to the next chapter, give us a few minutes to list reasons why you may want to use Web site authoring tools to create your e-learning.

- ▶ E-learning is steeped in Web technologies. Tools that implement these technologies are needed at least sporadically throughout most e-learning projects—a Web page here, a registration form there.
- ▶ Because Web site tools are sold to large markets, their developers have lavished time and money on making them capable, reliable, and easy to use. And their prices are also lower than many dedicated e-learning tools.
- ▶ For courses conveying information and hard knowledge, Web site tools may be all you need, especially for the presentation component of courses.
- ▶ Web site authoring tools can be combined with media editing and testing tools to create a custom course authoring environment.
- ▶ Your e-learning may need to integrate with other Web offerings and knowledge management efforts that are authored in Web site tools.
- ▶ Web site authoring tools are fast becoming a standard item in the toolbox of knowledge workers—like a word processor or spreadsheet. For e-learning producers it is a staple.

QUICK TOUR OF A WEB SITE AUTHORIZING TOOL

Let’s look at examples of some of the most important capabilities of Web site authoring tools and how they are used to set up and maintain a site. The tool shown is Macromedia Dreamweaver MX.



To create a new Web site, the author first defines the site by specifying characteristics such as where to store it locally, where to put it on the server, what its Web address will be, and what database connection it will use.



Authors create pages for the site by typing and formatting text, inserting graphics, and embedding other media. This visual style of editing allows authors to precisely size and position elements.

Authors can define and link style sheets to consistently format pages. Changes to the style sheet affect all pages linked to the style sheet.



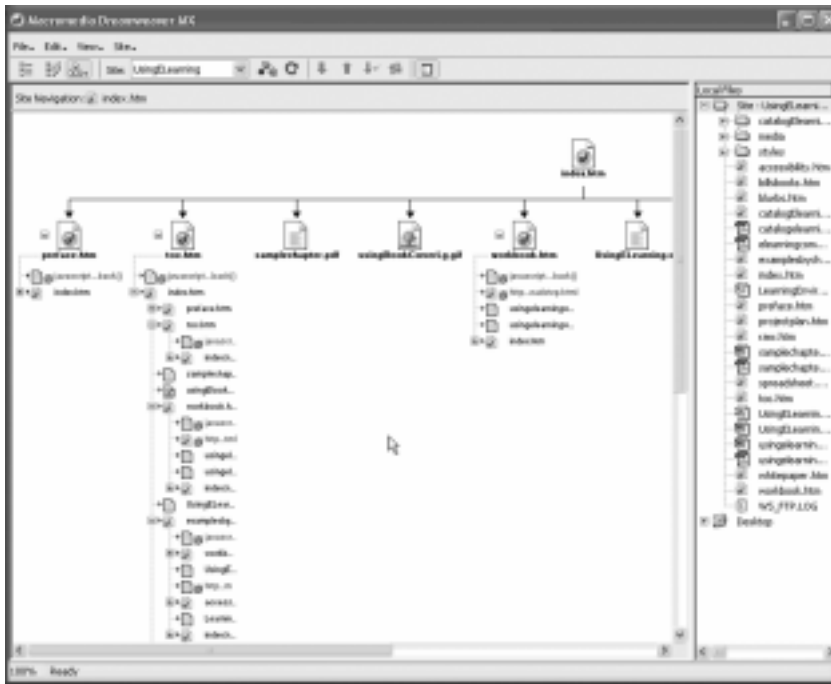
Authors can define templates for special kinds of pages—either from scratch or from an existing page, as in this example. The template has placeholders for components of content, such as graphics and blocks of text.



Once templates are defined, they can be used throughout a site for consistency among pages that are used for the same purpose. Here the template page for course objectives is being completed to create a new objectives page.



Authors can examine and modify the HTML behind pages. In this split view, the HTML is shown at the top and the visual display of the same page appears at the bottom. Changes in one view are immediately reflected in the other.



Authors are not limited to editing individual pages. They can view the entire site and link individual pages in a visual map view showing pages and links among them.



Authors can make changes throughout a site without having to open and change individual pages. Here the spelling of a word is being changed globally.

Other Web site authoring tools will differ in appearance and operation, but most provide the same basic capabilities.

HOW WEB SITE AUTHORING TOOLS WORK

Web site authoring tools simplify the process of creating complex Web sites such as those for e-learning. Visual page editors let authors edit a preview of the final page or other component without having to deal with underlying codes. They work much like modern word processors that allow the author to drag and position components on the page. If the page uses style sheets and dynamic HTML features, the preview may be quite lifelike, though some differences between browsers prevent absolute fidelity. Some Web site authoring tools come with code editors built in so that the author can quickly switch back and forth between editing the image of the page and editing its underlying codes.

Web site authoring tools create and manage large numbers of independent pages and their assets. They let authors work on the site as a whole, rather than just as a collection of independent pages. Authors can move and rename pages without breaking links or other dependencies. They can make changes throughout the site without having to edit pages individually. Such tools also make it easy to standardize layouts, colors, and icons, thereby ensuring a consistent and professional look throughout the site. Web site authoring tools also simplify creating navigation buttons and menus to implement a site-wide navigation scheme. And some have very robust scripting tools to enable authors to build sophisticated interactions that run either on the Web server or the learner's browser.

For developers of e-learning, Web site authoring tools make it possible to have total control over the way a course looks, behaves, and communicates with other systems. This is a popular approach for organizations with a capable Web development and programming staff.

POPULAR WEB SITE AUTHORING TOOLS

Here are a few of the best known Web site authoring tools. To learn more about any of these tools, please go to the vendor's Web site and conduct further research. (See if you can tell if they used their own tool to create their Web site.)

Dreamweaver

By **Macromedia**

macromedia.com

About \$400 USD

Dreamweaver MX is one of the most widely used Web site authoring tools. As a page editor, Dreamweaver is extremely full featured. In addition to injecting the basic HTML elements, Dreamweaver simplifies embedding media and creating tables,

frames, forms, dynamic HTML. It automates the entire editing process and behaves very much like a word processor. Authors can choose to work in visual mode, in HTML-only view, or in a split-screen view. And they can preview the page in any browser installed on their computer. One of the strong features of Dreamweaver is that it does not muck with your HTML code. It may tell you something is wrong, but it will not automatically try to fix it. Dreamweaver also has strong code editing tools, including auto-completion and debugging features.

Dreamweaver lets developers add utilities and advanced capabilities to the program through the use of extensions. These are prebuilt components that registered owners of Dreamweaver can download and install. There are extensions for e-learning developers, e-commerce site designers, and overworked site builders who want to make everyday authoring tasks easier.

Dreamweaver MX has powerful site creation capabilities too. It strikes a balance between the visual, drag-and-drop approach to site creation and the geeky, touch-the-code approach.



For authors of e-learning, extensions are available to add testing (CourseBuilder), learning management (Learning Site), and help with packaging standards requirements (Manifest Maker) from the Macromedia Exchange.

Dreamweaver MX does not have the visual site prototyping or design tools found in GoLive. It does have, however, very good editing tools to create database-driven Web applications and support scripting languages such as Cold Fusion, Active Server Pages, ASP.NET, JavaServer Pages, and PHP.

FrontPage

By Microsoft

microsoft.com

About \$170 USD

FrontPage has many of the same features as Dreamweaver MX. FrontPage will feel familiar to users of Microsoft Office. Users format text the same way they do in Microsoft Word and draw graphics as they do in PowerPoint. FrontPage does not have strong code editing tools, such as auto-completion or debugging features. For that, authors can use Microsoft's Script Editor that is installed with Microsoft Office XP.

In addition to being a good page editing tool, FrontPage is a capable site creation tool. It includes customizable graphical themes to enforce site-wide consistency, link checking, and site-wide find-and-replace. As with other Office XP programs, FrontPage is tightly integrated with Microsoft's SharePoint collaborative technologies and helps a developer set up a team Web site for intranet or Internet users to store, find, and share information, documents, and Web pages. To take advantage of some of FrontPage's features, such as the threaded discussion and search facility, your

hosting server must have the FrontPage extensions installed. With these, Web site administrators can easily get usage analysis reports.

GoLive

By Adobe

www.adobe.com

About \$400 USD

Adobe GoLive (www.adobe.com) is a powerful page editing tool that is tightly integrated with PhotoShop and Illustrator. For that reason, GoLive is a good choice for designers producing marketing content, e-zines (electronic magazines), or other highly graphical content. Its standard editing tools are similar to Dreamweaver and FrontPage. It does have one interesting feature that the others do not: You can author QuickTime movies and SMIL presentations right in the GoLive interface without the need for an external editor. GoLive has code editing tools, including color-coding and a customizable tag database. As with some of Adobe's other products, GoLive supports extensions that add development and content support.

GoLive also has good site design and management tools, such as support for graphical site prototyping and site mapping, including staging pages for testing and annotating items in progress. With GoLive, you can also create JavaServer Pages, Active Server Pages, or PHP Web applications that exchange data with a database. Version control, check-in/check-out, and centralized storage are handled by Adobe's Web Workgroup Server; thus enabling multiple authors to work on the same project.

NetObjects Fusion

By Website Pros

netobjects.com

About \$150 USD

NetObjects Fusion is a very full-featured, modestly priced site content editor. It possesses all the basic tools you need to create a complex, interactive Web site, such as a site diagramming tool, link checker, WYSIWYG editor, code editor, and database access tools. It is targeted at new Web site designers and is designed to be easy to use.

Others

Other popular WYSIWYG editors include:

Product	Vendor	Web address
HoTMetaL Pro	Corel	corel.com
Netscape Composer	Netscape	netscape.com
Amaya browser	World Wide Web Consortium	w3c.org

Though not as capable as the tools listed earlier, they offer simplicity. They may be all you need to complement other tools you are using.

ALTERNATIVES TO WEB SITE AUTHORIZING TOOLS

There are several other approaches you could take for Web-based e-learning content.

Course authoring tools

If your purpose is strictly to offer courses, there are specialized tools for creating courses and learning events. These tools remove course authoring from the underlying Web technologies needed to offer the course. You still need a Web server and additional offering software discussed elsewhere. You can read about course authoring tools in chapter 14. Course authoring capabilities are also found in LMSs (chapter 9), LCMSs (chapter 10), and virtual-school systems (chapter 11).

Help authoring tools

Tools for creating HTML-formatted online help can also be used to author Web sites. Though not ideal for sales and marketing sites, which require lots of glitz and a dash of glamour, these tools are very well suited to informational sites, especially large-scale, highly structured ones that need menus and an index for quick access. For more on Help tools, see chapter 14.

Conversion tools

Another option is to create your content in a program like Microsoft Word and then save it as HTML, use a conversion program like WordToWeb to convert it to HTML, or use Adobe Acrobat to save it as Acrobat PDF. Similar conversions are possible for PowerPoint. Chapter 18 describes these options. Conversions that preserve cross-reference links and Web links are certainly practical ways to create online textbooks and presentations.

Code editors

Hand-coding the HTML and other formats of a vast e-learning project may not seem very efficient or pleasant, yet it may be a reasonable alternative for teams blessed with an abundance of knowledge about HTML formatting. It is also practical when most of

the site is dynamically generated from scripts, perhaps pulling content from databases. In such cases, most of the site is really programming code.

Code editing tools provide a mechanism for entering text and code. Most let you type in text and press buttons to inject common codes or tags required by HTML, XML, JavaScript, and other languages. They are especially useful for embedding scripts or programming code, such as JavaScript or VBScript. By automating the process of inserting tags, code editors reduce syntax errors caused by misspelling, mistyping, and forgetting closing brackets and tags.

With code editors, the author still has to know the codes and tags of the language being used; however, some code editors include online documentation explaining the intricacies and formats of the codes.

Code editors range from simple text editors like Notepad and SimpleText, which come with the Windows and Macintosh operating systems, to sophisticated programming environments like Microsoft Visual Studio .NET. Most Web site authoring tools include a code editor window.

CAPABILITIES NEEDED FOR E-LEARNING

For authoring e-learning Web sites you need page creation and editing capabilities as well as site management capabilities.

Page creation and editing capabilities


There are several issues to consider when choosing a tool to create and edit Web pages for e-learning.

- ▶ **What functions does the tool automate for the author?** Can you create and apply style sheets for precise, attractive formatting of pages? Can you create buttons and interactive behaviors without writing any code? Can it use dynamic HTML to create animations?
- ▶ **How easy is it to create and edit media?** Say you add a graphic to a Web page, but the graphic is too large, can you double-click or use a menu command to edit the graphic in place?
- ▶ **Can you easily pick files for links?** Does the tool make it easy to point to a link's target or drag an icon to the target rather than having to type a full Web address?




Use these and other lists of capabilities as a starting point. Add capabilities you need and strike out ones you do not. Sort the list to reflect your priorities. Make it your own.

- ▶ **Can you embed rich media?** Does the tool have wizards or other helpers to make it easy to embed rich media into a page? And will the code generated by the wizard be cross-browser compatible?
- ▶ **Can you set the level of browser compatibility?** That is, can you specify that you want the tool to create code that works in only one browser or in multiple browsers? Does the tool temporarily disable features not supported in your targeted browsers?
- ▶ **Does the tool maintain changes you make directly in the code?** For instance, if you do make adjustments to the underlying code, does the tool accurately display your changes and leave them in place, rather than trying to rewrite them to suit its own internal scheme? In Dreamweaver, this feature is called *roundtrip HTML*.



Don't muck with my code!




Amen, Brother Thorndon!
- ▶ **Does the tool create pages that display equally well with all browsers and all Web servers?** Or, is the tool tuned for one particular brand of browser, server, or operating system? For example, Microsoft FrontPage provides some very useful features that unfortunately work only in the IE browser and from a Microsoft Web server.
- ▶ **Will the tool check your code?** Can you validate your code to ensure that it is compliant with W3C standards? This becomes important if you want to maintain multi-browser compatibility and offer content to wireless devices.
- ▶ **Can you easily create page templates?** Can you turn an existing page into a template? Can you design a template from scratch? How easy and reliable is it to apply a new template to a page or to change a template and reapply it to all pages based on it?
- ▶ **Can you easily find and use recurring elements?** Does the tool let you place frequently used components like text, code, or images onto a palette for easy access?
- ▶ **Does the tool support XML?** Can you export content from templates into XML? Can XML be imported into a template? Does the tool double as a general-purpose XML editor? XML is covered in chapter 23.
- ▶ **Can you import from word processors?** Can your tool open files created in your favorite word processor? How much of the page layout and text formatting is preserved?

Site management capabilities

A Web site is more than a folder of pages. It has structure, menus, and coherence. Good Web site authoring tools include capabilities for creating and managing large, complex sites. In considering such tools, ask questions like these:

- ▶ **Can you diagram your entire site?** Can you create a visual representation of your proposed site and populate it with placeholder pages? Can you also create fully linked navigation bars based on this plan?
- ▶ **Can you automatically create navigation mechanisms?** For instance, can the tool automatically generate an overall course menu, index, glossary, and map from information about the components? Can it generate links from an outline? Can it generate a reading trail, navigation bars and buttons, and other navigational aids?



A reading trail designates a sequence of pages traversed when the reader jackhammers the Next button.
- ▶ **Do you have flexibility in directory structure?** Does the tool allow you to define a custom structure of folders and files, and to assign specific names for them?
- ▶ **Can you ensure a site-wide look and feel?** Can you set file formats, page layouts, colors, and fonts for an entire course or other collection of objects at one time in one place? Can you easily edit those choices if you change your mind?
- ▶ **What project management features does the tool provide?** Can it help you plan and track progress on individual pages? Will the tool help you manage required tasks, resources, budgets, and milestones?
- ▶ **Can developers test courses and lessons locally?** Can authors create, preview, and test their courses locally before uploading them to the server? Or, does the tool let them work directly on the server?
- ▶ **Does the tool simplify the task of uploading content to the server?** Is uploading content a one-click operation? If files are large, can the tool automatically handle the compression, transmission, and decompression of the files?

- ▶ **Does the tool enable collaborative authoring?** Can content be created, edited, and assembled by a team of instructional designers, subject matter experts, media developers, reviewers, quality assurance testers, and project managers working on different continents? Does the tool support check-in and check-out to prevent accidental overwriting?
- ▶ **Does the tool track revisions and multiple versions?** Does it have the ability to flag deletions, additions, and changes for approval or rejection? Can the tool maintain multiple versions?
- ▶ **What advanced capabilities can the tool add to your site?** For example, can the tool add a search facility, save data entered on forms, or enable you to construct discussion forums?
- ▶ **Does the Web site depend on proprietary server components?** Such server extensions may add needed capabilities, such as a search facility, but may not be available for all servers.
- ▶ **Does the tool simplify using server scripts?** Does the code editor help you write scripts to run on the server? Does it check the code? Can the code be color-coded? Does the tool provide a menu of predefined server behaviors that can be used for scoring tests and communicating with databases?
- ▶ **Can the tool ensure a consistent look across the whole Web site?** Does the tool support site-wide style sheets? Does it allow you to predefine custom buttons and behaviors and then drag and drop them on pages? Does it provide templates to predefine the layout and repetitive content of classes of related pages?
- ▶ **Can you find and replace text across the entire site?** Can you search for words or phrases in both the text and the HTML tags? Can your search use wildcards like a question mark to match any single character or an asterisk to match any sequence of characters?
- ▶ **Can authors search for content?** Can authors easily find individual pages, pictures, and other media components? Can authors use index/search keywords to locate already authored pages and other units to include in their course?

BLOGGING TOOLS

When blogging tools first arrived in 1998, people asked “What’s a blog?” The word “blog” is a contraction of “Web log” and is used both as a noun as well as a verb. To *blog* is to write content to a *blog*. A *blog* is a Web-based personal diary with dated entries. The beauty of blogs and blogging software is that they enable a writer to concentrate on content by removing all the distracting details of publishing the content to a Web site. An author can simply write and publish in one easy step. Magic! No knowledge of HTML or FTP is needed.



Here is the companion blog for this book. You will find it at horton.com/tools/blog.htm.

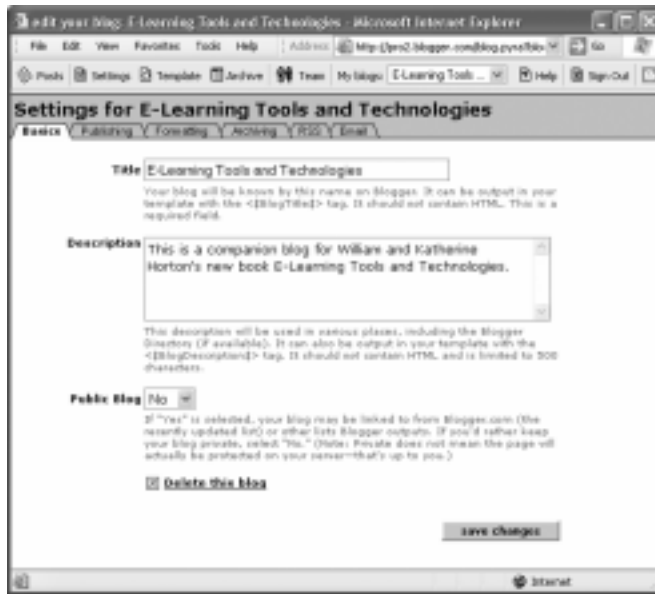
By design, blogs are best suited for the spontaneous thoughts and observations of an individual or team. They are not designed to facilitate rapid-fire back-and-forth discussion on a particular issue. To do that, you are better off using chat or a threaded discussion forum (chapter 11).

Quick tour of a blogging tool

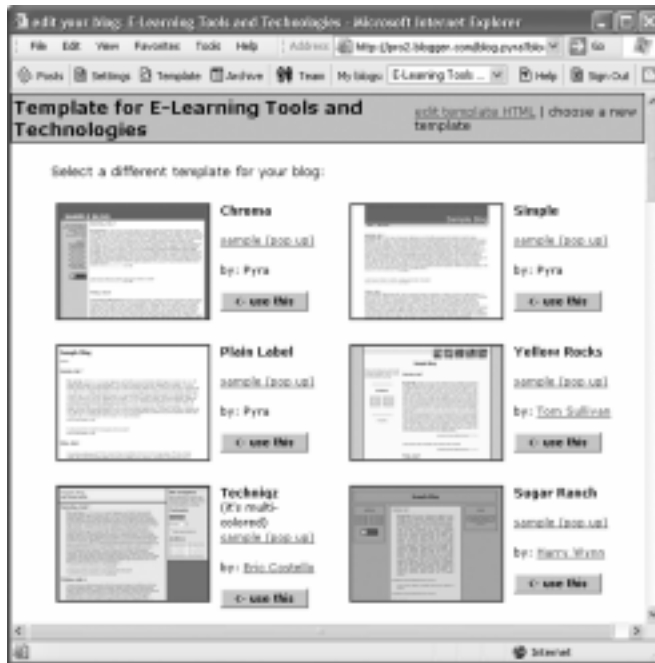
Blogging tools are available as free or moderately priced services and as products you purchase and install on your own server. Here is a tour of a popular blogging service called BloggerPro from Pyra Labs (blogger.com).



Sounds like a bad stereotype of British slang: “Blimey, some bloody bloke blogged my site.”



To start a blog, the author specifies a title and description. The author also specifies where the blog will be located and if a password will be needed to post or read messages.

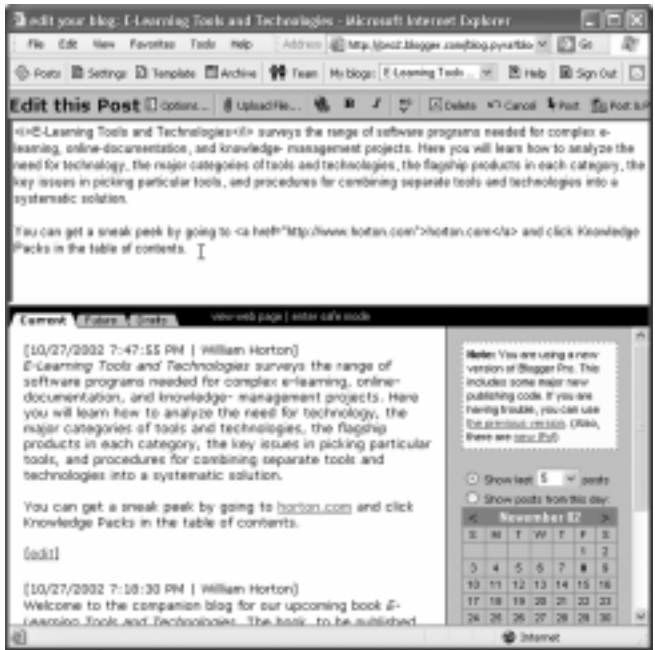


Next, the author picks a template to control the layout or color scheme of the pages. This template can be modified extensively.



The author can then add coauthors and give them posting privileges.

The ability to have multiple authors makes blogs a collaborative tool.



To post a message, the author types into a text field and clicks the Post & Publish button.

The new content is formatted, added to the existing blog, and posted to the specified location.



Here is the reader's view of the blog. The entry at the top is the most recent.

As the blog becomes long, older portions can be archived and links to the archives posted.

Most blogging tools allow posters to add graphics, links, and other HTML to their posts.

How to use blogs for e-learning

Blogs can provide a convenient way for learners to document learning experiences, such as interesting readings, the Web addresses of good examples, and questions and answers they have. Blogging tools remove any barriers to publishing to a Web site by allowing authors and learners to concentrate on content instead of technical operations.

Popular blogging tools

Blogging software is new, but several tools are available. Let's look at a few popular blogging tools.

Blogger

By Pyra Labs

blogger.com

Free

Blogger and BloggerPro are two of the best known blogging tools. They are services rather than shrink-wrapped products. Blogger is a free service and BloggerPro costs a nominal annual fee. Blogger and BloggerPro allow you to publish your blog to any server with FTP access.

Radio UserLand

By UserLand

userland.com

About \$40 USD

Radio UserLand is a product rather than a service. Like Blogger, blogs can be sent to any server after being processed—in this case, processed right on your own computer. Another feature many users like is that Radio UserLand makes it easy to gather news from around the Web and post it to your blog. Radio UserLand users can also syndicate their content, allowing other Radio UserLand subscribers to display their posts making it especially useful to sites that focus on news and commentary. Radio UserLand offers a 30-day free trial, after which you must purchase the software. Because the application is not Web-based, each author who contributes to your blog, must own their own copy of the application.

Manila

By UserLand

userland.com

About \$900 USD

Manila allows a dispersed team of designers, writers, and graphic artists to work on a common Web site using a Web browser interface. This service is geared to project teams, training classes, and even large, far-flung families. Manila is sold as part of the UserLand Frontier content management system.

Others

Other popular blogging tools and services include these.

Product	Vendor	Web address
Free Open Diary	The Open Diary	freeopendiary.com
Blog Studio	Indigo Technology Partners	www.blogstudio.com
MoveableType	Moveabletype.org	moveabletype.org
Pitas.com	Pitas.com	pitas.com
TongueWag	TongueWag Limited	tonguewag.com
Big Blog Tool	Big Guy Media	bigblogtool.com

Capabilities to look for in a blogging tool

To use blogs in e-learning, you need to evaluate blogging tools with that purpose in mind. Here are some issues we think are important in choosing a blogging tool as part of your e-learning project.

- **Ownership and costs.** Are you buying a service or a product? You need to read the licenses carefully. When you buy a service, you typically pay a yearly fee as well as other charges, such as an excess storage fee or a fee for posts over a certain limit. Conversely, when you buy a product, you own it—along with all the set up and configuration problems that may come with it. Consider your needs and level of technical expertise.
- **Hosting.** Where is your blog hosted? If you do not have a Web site of your own, you may want to be sure that the blog tool you purchase (or subscribe to) has a free hosting service. Conversely, you may want to be able to host your content on a server of your choice. Not all tools offer this kind of flexibility.

If you do choose a free hosting service, consider how much you can customize the graphical appearance. Does advertising appear in your blog? If so, is there a service upgrade that removes the ads?

- ▶ **Security.** Security controls who can author and read a blog. If you are sponsoring a group blog, how do you ensure that only contributors that you have cleared can post to the blog? Likewise, how do you limit access to authorized learners?
- ▶ **Administration.** If you are using a blog as a collaborative tool, how easy is it to add new contributors to your blog, change the order of posts, approve posts before they are added to your blog, and archive outdated posts?
- ▶ **Search.** How easy is it for readers to find specific posts in a blog? Can they search by date, by subject, by title? If you have a long blog, the ability to find a particular piece of information is important.
- ▶ **Posting.** What is required to add new content to the blog? Can you post from any computer using the Web, or do you need a special application installed on your system? It may be more convenient for you to be able to post from anywhere. Does the tool check your spelling with a spellchecker? (Face it, everybody needs an editor.) Can you edit posts after adding them to a blog? Can you make posts through a firewall?

RELATED TOOLS

Your choice of Web site authoring tools may affect or be affected by other technology decisions. For instance, site authoring tools are sometime closely allied with certain server technologies. GoLive supports authoring PHP server-side scripts. Dreamweaver MX makes it easy to author Cold Fusion Web sites as well as Active Server Pages. If your graphics and multimedia department are vested in Adobe Illustrator and Photoshop, you may want to pay special attention to Adobe GoLive. If you want to design e-learning assessments without purchasing additional test authoring software, you may want to choose Dreamweaver MX because the CourseBuilder extension for creating tests is a free add-on.

Although few Web site authoring tools directly integrate media editing capabilities, many can import and embed Web-ready media from popular media editors. Some Web site tools are bundled with media editors and sold as Web creation suites.

WHAT NOW?

To put the ideas of this chapter into action, you need to make decisions and take actions. Here are some recommendations for how to proceed.

If you ...	Then ...
Are still designing your e-learning	<ul style="list-style-type: none"> ▶ Consider what forms of Web content you need to create: courses, administrative pages, textbooks, and reference materials. Also, consider how other Web content for your e-learning should be created. These insights can guide your decision about whether you need a Web site tool as part of your e-learning efforts or what kind of content you would use it for. ▶ Also, decide whether you need a full-featured Web site authoring tool, just a blogging tool, or both.
Are at the point of picking a Web site authoring tool	<ul style="list-style-type: none"> ▶ Use the criteria in this chapter as a starting point. List your requirements. Check for additional Web site authoring tools beyond the ones listed here. Then use the process in chapter 20 to make your selection.
Have already picked your Web site authoring tool	<ul style="list-style-type: none"> ▶ Map your needs to specific tool capabilities. Create a guide for authors about what to use—and what not to use. ▶ If you have chosen a sophisticated authoring tool, train your authors in its use. ▶ Develop templates, style sheets, custom menus, code snippets, and insertable objects needed to make authoring e-learning easier. ▶ Integrate this tool into your overall workflow.

When used in e-learning, Web site authoring tools are often combined with testing and assessment tools, like those covered in the next chapter.