The fact that there are so many authoring tools on the market is a clear indication that different organizations have different needs. It’s also an indication that many organizations are creating different types of e-learning content.

Before selecting the tools you will use to create e-learning content, you should consider many factors, including:

* What is the level of technical ability of your developers? Who will be responsible for creating your content? Programmers? Graphic designers? Subject matter experts?

* What type of content do your learners require to be engaged?

* What level of interoperability must this content have with your learning management system?

* How long a life must your e-learning content have?

* What features do you really need?

**Ease of use**

Authoring tools are now available that can make a new developer look like he or she has been developing content for years. Many tools come with pre-built course templates that simply require the developer to populate fields or frames with the appropriate text, images, animations, and video segments. Once that’s done, all that remains is to publish the content. You might want to consider easy-to-use tools if you plan to have subject matter experts (SMEs) develop content right in the authoring tool. In some organizations, SMEs are course authors from the beginning to the end of the development process. In other organizations, SMEs are the initial content authors. Technicians are then called in to polish and finalize the content.

So why aren’t the easiest-to-use tools the most popular? Although all tool vendors aim to make their software intuitive and easy to learn and spend considerable time and money on usability testing, there’s a cold reality that the greater the level of functionality and extensibility, the longer it takes to learn to use the tool and the greater the perceived level of difficulty. Very easy-to-use tools are often capable of creating template-based content very well. They often do not, however, provide the ability to customize their output to any great degree. If they lack a feature, the easiest-to-use tools rarely allow to developer to develop the functionality through scripting or programming.

**Level of engagement**

In the early days of e-learning, learners were often impressed with the novelty of taking courses online. Just the fact that learners could study at their own pace and leisure at their desks, rather than attend long classroom-based sessions, often provided sufficient “wow” factor to keep them excited. For many organizations, those days are over.

Students have been taking online courses for a number of years now, and the delivery has lost its novelty. To keep students engaged, especially for topics that require a greater time investment, the content and presentation needs to be stimulating. A six-hour-long orientation course split into 30-minute static, text-filled, page-turning modules will not generate a high completion rate unless the training is deemed mandatory. Forcing learners through such training will not create excitement for future non-mandatory e-learning courses.

Not all content needs to be media rich. It isn’t necessary to blow your development budget on a
30-second course introduction suggestive of a Hollywood blockbuster. But, if your learners will be asked to sit through long, difficult topics, consider acquiring authoring tools that will allow you to create content that will keep their interest levels up. Simulations that allow them to learn while doing, instructional games such as crossword puzzles, even branching, text-based scenarios can help keep students engaged.

On the other hand, if the training you need to provide requires a smaller time commitment, or if your learners are the type who like to quickly access a short topic, find the information they need to complete a critical task, and jump out again, then static, simple, text-based e-learning content may be the most appropriate approach for your organization. In such a situation, creating flashy intros, instructional games, and simulations will likely lead to frustration on the part of learners who need answers quickly. Although this type of “just-in-time” training falls closely within the definition of performance support, static online content with few media elements can be appropriate in situations where topics are small and need to be accessed quickly.

For most organizations, there isn’t one ideal type of e-learning content. The training topics and the characteristics of the learner should really drive the presentation. Simple, static Web pages may be fine for one topic but not for another. Discovery games and role-playing may be perfect to teach a soft skill but inappropriate to teach programming. A recorded demo may be fine to show someone how to do something using a software application, but it will not be appropriate for other subjects. The result is that you likely will require a number of tools to create different types of e-learning content.

**Interoperability and e-learning specifications**

Learning management systems (LMS) are the e-learning cornerstone of most organizations. An LMS automates the administration of training events, registers users, manages courses in a catalog or by competency, manages online assessments, tracks the completion level of student interaction with content, and provides reports to management.

Although many learning management systems contain built-in authoring capabilities, none offer the ability to create such a wide range of content as is possible with third-party tools presently available. No single LMS, for instance, can provide the ability to create Flash animations, Java applets, animated GIF files, instructional games, etc. Authoring tools built-in to an LMS are often aimed at importing media elements such as images, audio and video clips, animations, and simulations -- and assembling the pages using this content.

So, although your LMS may contain authoring capabilities, you may still find yourself turning to third-party authoring tools for the development of specific components.

Integration of authoring tool content with learning management systems raises the issue of interoperability. For an LMS to be able to track a course or assessment created with a third-party authoring tool, the LMS and authoring tool must be able to communicate. The course, for instance, may contain assessment questions. The LMS must be able to track whether the student successfully answers these questions, as well as whether the course was completed or abandoned. For the LMS to be able to track the course, communication standards need to be in place.

The e-learning world follows a number of standards, including AICC (Aviation Industry CBT Committee), SCORM (Sharable Content Object Reference Model), IMS (IMS Global Learning Consortium), and DCMI (Dublin Core Metadata Initiative), among others. By far the most popular standards are AICC and SCORM.

Some authoring tool vendors have made standards compliance and even certification a priority. Other authoring tools on the market may state that they conform to an e-learning specification, but since “compliance” is not regulated, the level of compliance may vary. If you want your e-
learning content to be tracked in detail by your LMS, focus on vendors that place a great deal of
time and effort on standards compliance. In addition, since most tool vendors provide evaluation
versions of their software, perform a few tests of prototypical content within your LMS.

Content longevity

The “shelf-life” of e-learning content should be a consideration in selecting appropriate authoring
tools. Some organizations produce a lot of content that is quickly out of date. Reusability isn’t a
factor since the content is only meant to serve a purpose for a few months. On the other hand,
some organizations may require that their e-learning content be developed and updated for many
years to come. Companies in industries such as aviation, for instance, require maintenance
training courses to be available for all the years in which a specific model plane will remain part of
their fleet. Training on using enterprise systems such as ERPs or HR systems may be another
example of a situation that requires the maintenance of content over the long term. The ERP or
HR program may evolve through a number of version enhancements over the years, but these
enhancements may only affect training enough to make it cheaper and easier to edit the existing
content than to start developing new content from scratch. In these two examples, reusability and
longevity of content is a priority.

Content shelf life raises a couple of issues. For one, if reusability of content is a priority, you
should consider working with authoring tools that produce pages and media elements that
integrate well with learning content management systems. This will help manage what can quickly
become a large amount of content.

A second more sensitive issue is whether current proprietary file formats are supported in years
to come. Just as floppy disks have become extinct, so will some authoring tools. Companies fail,
merge, or are acquired by others. You would think that buying tools from a well-established
company would mitigate those risks, but this is often not the case. Even in the most successful
companies, products are retired and replaced with new ones.

Here’s an example. Years ago, a leading software vendor launched a Windows-based authoring
tool specializing in creating database-driven Web sites. The tool used a proprietary file format
from which Web pages were generated. Since such development tools were rare back then and
the demand was growing for Web sites that could access content in a database, many
developers purchased the product and used it to create Web sites. About a year after the launch
of this product, the company discontinued the software and replaced it with a new product. Not
only was the product removed from store shelves, but the company also decided not to support
the product in any way.

A few months later, Microsoft launched a new version of the Windows operating system. This was
a significant upgrade to the operating system, so many developers purchased and installed the
new version of Windows. The HTML/database development application that was retired by the
software vendor didn’t work in the new operating system. Developers were now stuck with the
problem of maintaining and updating existing content without being able to use the software that
was used to develop the content. Although the product generated HTML files, it was impossible to
use a different HTML editor to update the content since alternate development tools couldn’t
display the content correctly in their editors. In the end, these justifiably cranky developers had
little choice but to redo all their sites from scratch using another tool.

In summary, if you believe you’ll need to maintain and update your e-learning content for
many years, ask yourself these questions:

1. “What are the chances this authoring tool may no longer be available?”

2. “How will we maintain this content if the authoring tool we used is no longer available?”
3. “Can the content be edited using another tool?”

4. “To what extent does this tool use industry supported formats at the authoring level?”

Considering these questions now can help you avoid the need to re-author substantial amounts of content at a future date.

Business requirements

We often hear horror stories about cost overruns in selecting a large application such as a learning management system. The cause is often “feature scope creep.” Feature scope creep occurs when committees start to create a list of fundamental business requirements and end up with a laundry list of every possible feature. Finding an LMS to fulfill these requirements often requires custom development on the part of the LMS vendor -- and costs go up accordingly.

Since even an enterprise license for an authoring tool cost substantially less than an LMS, feature scope creep may not result in large cost overruns. But, without considering your requirements in selecting authoring tools, you may end up with the wrong products for the type of content you wish to present to your learners.

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