eLearning, HTML5, and the end of Flash?

For years the reigning king of eLearning interactive training has been Adobe Flash®, but now Adobe has declared the end of Flash and is touting the new upstart “HTML5.” As eLearning developers, we are often asked, “Are you HTML5 compliant?” The short answer is a definite “Yes!” However, it gets tricky because often that isn't the question that should be asked. There are many factors that should be used to determine the development environment and tools in building any eLearning solution.

Just what is “HTML5” and what’s going to happen to Flash? What does this mean for courses that you have already created? What will you do without Flash? What can you do with HTML5? And what considerations do you need to factor in for eLearning?

Let’s start with some of the basics and go from there.

What Is HTML5?

An easy analogy for understanding the components of web creation is to think of HTML as the part that creates the structure (the house with walls, doors, windows, etc.), CSS applies the appearance (the paint, layout of doors, windows, etc.), and JavaScript (along with HTML) provides the functionality (the microwave, the refrigerator, the furnace, etc.). The following explains each in more detail.

HTML5 is the next evolutionary step in the advancement of the HTML standard. In fact, it is a really good step! HTML5 encompasses what had become the fractured world of HTML variations and extensions and brings them all back together under a single standard.

HTML is a notation for describing the containment of web-delivered elements. Like any other container, it is the content that you put into it that defines its shape and use. HTML5 is just a better HTML in that it can carry more types of content. However, as with all containers, it’s what you do with it and/or carry in it that really counts.

HTML5 is Not CSS3

Cascading Style Sheets (CSS), like HTML, is a notation scheme. HTML focuses on the arrangement and delineation of elements. CSS focuses on the properties of those HTML elements. CSS3 is just the latest version. Although recently coming into the spotlight, it has been around for nearly six years.

HTML5 is Not JavaScript

HTML5 is also not JavaScript. Remember, HTML and CSS are containment and descriptive notations—and JavaScript is a language that can manipulate them. JavaScript is one of the most powerful languages to emerge in many years – but still only a language. You can only get out of it what you put into it.
There's HTML5 and There's "HTML5"

You now understand HTML5, CSS3, and JavaScript but that might all get confusing when you start listening to the talk of how HTML5 is replacing Flash. How could that be? We just said that HTML5 is a container and we all know that Flash is an element that works in a container.

When we start comparing Flash to HTML5 we are actually comparing it to "HTML5" (notice the quotes). "HTML5" is the environment available for web-content delivery and manipulation that is fostered by the combination of the latest versions of HTML, CSS, and JavaScript when executed within a modern HTML5-compliant web browser. In other words, if HTML5 is a container, "HTML5" is an element that works within the container.

Still confused? Think of it like this. When we "Xerox" a document on a Canon copier we are actually just copying the document, but at some point the trademark started being referred to as the action itself. It is a bit the same in the land of "HTML5." It is easier to say "HTML5" and so we do. Nonetheless, "HTML5" is not HTML5 any more than "Xeroxing" is what we do at the copier these days.

How Does Flash Fit In?

You now have an understanding of the components of a web page but we haven't yet talked about Flash. How does Flash fit in?

What Is Flash?

Remember, a Flash movie is an element within a web page; it has powers and abilities far beyond those of normal elements – but only because the web browser has loaded the Adobe Flash Player (AFP) plugin. By itself the web browser doesn’t know Flash from any other element. It knows it can be looked at and clicked on, but not much more beyond that. The AFP plugin knows a whole lot more than that. It knows that the Flash content has duration and an internal set of [Action Script/Flex] instructions as well as many different embedded elements of its own to play with. The Flash movie is really a mini web page within a web page!

But in the end, a Flash movie is only an element. The web browser hands off all control of that element as soon as it gets it. If a web browser does not have direct knowledge of an element’s “insides” and it doesn’t have a relevant plugin to whom it can pass control, then that element is displayed as a “broken” bit of the web page or not at all.

Is HTML5 Replacing Flash?

Adobe’s announcement that it would stop developing its mobile Flash player and instead focus on development of HTML5 for mobile devices was followed quickly by the announcement that they are putting the instructional language of Flash movies out to pasture. That announcement was followed by the introduction of their “Edge” development environment that would output Flash-like content in a fully “HTML5-compliant” manner without Flash.
These announcements led to a large outpouring of support/dismay over the “Death of Flash.”

However, **Flash is not dead.** Existing Flash content will continue to run as long as there are web browsers with the AFP plugin loaded to display it. Flash is an element and won’t go away any more than images will go away. There will be a decreasing supply of new Flash movies as developers slowly phase away from Flash, but this is going to take years and years. If you want to create new educational content using Flash, go right ahead. Flash will be around for quite a while yet.

**What Does All of This Mean to eLearning?**

Now, what do you do with all of this information? There are a number of decisions to be made while determining the path your eLearning solution should take. Let’s explore some of the questions you will need to answer:

**How Will Your Content Be Delivered? What Browser Will Your Learners Use?**

Probably the biggest determining factor on whether to develop in an HTML5 or Flash capable environment is what browser your learners will be using to access the content. If the majority of your learners have the potential for completing content via an iPad or other mobile device, it would make sense to move into HTML5. However, there are still many corporations whose browser standard remains at IE 6 and IE7, neither of which have native HTML5 support. In looking at how to reach the largest population of eLearners, it's hard to beat Flash when you consider that 99% of the available web browsers support Flash while only 40% support HTML5. The newness of HTML5 makes this understandable but something you need to consider when your main goal is compatibility.

**What Type of Animations Does Your Project Require?**

HTML5 provides animation support with "HTML5." Those used to Flash-based eLearning may find the animations created with "HTML5" limited. It is expected that "HTML5" will catch up in the near future but for now Flash is still the go to for the whizz-bang interactions. Sometimes the whizz-bang is important to making a solid design and sometimes it is just fluff. You'll need to consider your animations and whether you can build solid eLearning within the "HTML5" environment.

**What Are Your Video Requirements?**

Currently there is no standard format for HTML5 video (the video that can be played by using the HTML5 element directly in the browser without the need for a plug-in like Flash). There are three main video formats (MP4/H264, Ogg/Theora, and WebM/Vp8) supported by HTML5 browsers but unfortunately no single format works in all browsers. So, for the widest possible reach, your HTML5 solution should support multiple video formats and be able to serve the correct video based on the client’s platform and browser. That being said, Flash is still the platform of choice for long-form video playback.
Conclusion

We see a future where Flash and HTML5 are options for quite some time. The solution that works best for your eLearning needs will be driven by many different factors. At ePath Learning, we are ready to help you navigate those decisions and create dynamic instructionally sound learning solutions.

Contact

ePath Learning, Inc.
(908) 722-6622
sales@epathlearning.com
www.ePathLearning.com

*Adobe Flash is a registered trademark of Adobe Systems Inc.