IOC 2005

No programming necessary!

The promise of multimedia presentation software for creating quality learning objects

Introduction

Hi and welcome to our presentation No Programming Necessary, the promise of multimedia presentation software for creating quality learning objects. My name is Eli Collins-Brown and my co-presenter is Dr. Cheri Toledo. We are both from the Curriculum & Instruction department at Illinois State University. Cheri is an assistant professor and co-coordinator of the Instructional Technology Design Masters program. I wear a couple of different hats, first as an instructional and web designer. I've been helping professors put their courses online for almost 7 years now. Secondly, I am an online instructor for the University of Phoenix, and thirdly, I am a doctoral student in the C&I program at ISU.

On each page we've provided audio narration but if you'd rather not listen to my beautiful voice, you can read a full text script by clicking on the PDF link. Thanks for stopping by and we hope you enjoy the presentation.

Background

PowerPoint has been used by instructors for presenting their content in the classroom since the mid-1990s. They use the presentations to lecture from and many give their students the printed slides pages so that they can take notes during the lecture. PowerPoint is an effective way for instructors to organize, present and move through their lectures or lessons.

With many of these instructors moving their content online, either to supplement an on-campus course or to build a 100% online course, they tend to continue to use PowerPoint presentations without realizing how much different the online environment is than the classroom face-to-face environment. Without the instructor's verbal presentation, the slides are fairly ineffective as a learning tool. Students receive greater benefit from a thoroughly descriptive text-based lecture.

Many current online courses are text only and might not take advantage of the Web's ability to display graphics, animated graphics, animations, graphs, charts, and simulations, and audio. Acknowledging that reading text from a computer monitor is difficult, research suggests that adding a particular mix of multimedia elements, such as supplementing graphics and/or text with audio ,will result in enhanced retention and transfer (Mayer et al. 2001, Moreno & Mayer, 1999). Based on the results of various studies, Moreno and Mayer specifically recommend that "words should be presented as auditory narration rather than as visual on-screen text; that is, words should be presented auditorily rather than visually" (p. 359). Based on the dual-processing model, which states that we use separate channels in our working memory for visual and auditory processing (Moreno & Meyer, 1999), adding narration to well-designed PowerPoint presentations may improve student retention and transfer.

Because different versions of PowerPoint will results in various viewing experiences based on the version of PowerPoint, the operating system, and even the computer specifications, it is difficult to provide a consistent experience from user to user. Saving a PowerPoint into a web page is a

possible solution, but the result is not very attractive, and presents the designer with technical challenges that go beyond the average instructor's experience and tolerance. The audio icon must be visible for the audio to play and the timing of the slides does not work. The interface is also not very attractive and does not work properly in some browsers.

In searching for solutions to help make adding audio to PowerPoint presentations a bit more streamlined, we turned to screen capture software packages, counting on their advertised promise of being able to create "high quality visual learning resources, enriched with captions, audio, animations, and more " (Macromedia.com).

Background

In 2000, while Eli was working as an instructional designer in the Center for Distance Education at the University of Texas at Arlington, she was presented with the challenge of converting existing PowerPoint presentations into media presentations. At that time there were fewer options than are available today. For one course they used LiveSlideShow (LSS) (http://www.liveslideshow.com/), by Totally Hip, to add audio and user-control functions to the professor's existing PowerPoint files. The process was fairly straightforward, once we figured out how to create the movies.

The process followed these steps. The professor recorded the narration from a pre-written and rehearsed script in the audio studio. The audio was then edited for any imperfections and cut into smaller files. Each slide contained its own audio file.

The PowerPoint was touched up by applying basic instructional design principles, then the slides were prepared to be imported into LSS. This included adding a slide for each additional bullet point or animation, and then using PowerPoint on a MacIntosh to save the files as individual Jpegs. Instead of using the built-in animation in PowerPoint, each individual slide would be added to a timeline in LSS with blended transitions to emulate the effect of the PowerPoint animations.

The audio and slides files were imported into LSS and place on the timeline with fade-out transitions between slides. Then the file was exported to a QuickTime format where we added the controller bar. At this time, the files were still a bit large for our users, so we used a compression software and ended up with reasonably small, nice quality QuickTime movies. Here is an example. Insert CSE5350sam.mov1.qt

In the Fall of 2004, Cheri taught Instructional Technology Design at Illinois State, in which Eli was enrolled is as part of her doctoral studies. Both of us are interested in finding and experimenting with new software and determining how it might be used to create well-designed and effective instruction. We saw some examples of some of the more popular software on the market today during this class and decided to do some experimenting. This presentation is a result of that 'playing.'

Products

There are many screen capture programs on the market today. Due to time constraints, we had to narrow our selection down to three: Camtasia, Captivate, and Wink.

One of the products that was used in a student project is Camtasia, by TechSmith. The information provided on the TechSmith web site states, "Camtasia Studio is a complete solution for quickly creating professional-looking videos of your PC desktop activity. Anyone can *Record* and create a full-motion video tutorial or presentation, in real-time, and publish it in the format of their choice. No multimedia or programming experience necessary!" (http://www.techsmith.com/products/studio/default.asp?lid=CamtasiaStudioHome).

Macromedia has recently released Captivate, formerly RoboDemo. Macromedia is one of the largest providers of web solutions software, so we decided to include Captivate in this experiment. Their web site reads, "Macromedia Captivate is the easiest way to create professional-quality, interactive Flash simulations and software demonstrations. Without programming or multimedia skills, automatically record all on-screen actions to instantly create demonstrations complete with mouse movements and text captions, or simulations with scored interactions and instructional feedback. Point and click to edit, customize, or add eLearning interactions …For faculty, Captivate makes it possible to engage and inspire students with high quality visual learning resources, enriched with captions, audio, animations, and more" (http://www.macromedia.com/resources/education/hed/special/captivate/).

Another product discussed was Wink, by Debugmode. "Wink is a Tutorial and Presentation creation software, primarily aimed at creating tutorials on how to use software (like a tutor for MS-Word/Excel etc). Using Wink you can capture screenshots of your software, use images that you already have, type-in explanations for each step, create a navigation sequence complete with buttons, delays, titles etc and create a highly effective tutorial for your users" (http://www.debugmode.com/wink/).

All three products create Flash movie files (.swf) as their output. These files can be viewed in any browser, are not platform specific, and can be embedded into web pages.

Process

Eli created the PowerPoint presentation and added narration. She spent a total of 6 hours putting together the presentation, recording and editing the audio and adding it to the PowerPoint. The timing and audio worked well when viewed in PowerPoint and as a .pps file, but did not play when the file was converted to a web page.

Cheri took the final PowerPoint file and used the three different software packages to create the Flash movies. She kept of journal of her experiences with the different products, including how much time it took, file sizes, what challenges and issues she experienced, ease of use and impressions of final results. Here is a summary from that journal:

Wink – total time: 39 minutes
3.01 MB
After looking through the User Guide and clicking through the Tutorial I tried 3 or 4 times to capture a page, with no luck. I did not know the difference between the types of capturing methods, so after looking through the User Guide I decided to use normal capture. I began capturing slides. It was very boring and tedious to have to press Pause every time the screens changed. I followed the User Guide directions and rendered the project. There were no parameters on how to set timing on slides, so went with the default. After viewing the project it was clear that the slide transition was too fast. I changed the timing 1000 msec and rendered the project again. The transition was still too fast so I changed it to 1500 msec. This was a cumbersome process as I had to go through each slide and change the time by hand. After the transition was acceptable, I found that another problem was slides that were larger than the screen area. I searched User Guide for embedding sound instructions and found that sound cannot be added. It took some time to figure out how to save it as a Flash movie; I found that the problems with the screen viewing area were not an issue now.

Camtasia – total time: 64 minutes
7.54MB
To begin with, it took over 30 minutes to download Camtasia and the other needed software. During the download time I watched the instructional video from the Camtasia website. Once the program was loaded and initialized, I started the PPT, then pushed F9 to begin the Camtasia recording; as the PPT recorded I walked away and did other things for 15 minutes. In replaying it, I found there was no sound. I imported the MP3 files, then clicked and dragged them into the

audio timeline – only the audio played, it was not linked with the video – I dragged the video down and it was still not linked to the audio. I looked through the user guide, but was ultimately unable to add the audio. It would have taken another hour or two to figure out how to add it and then to edit it to play with the video. The final product only played in the browser window – the Flash movie did not play. Additionally, the movie will not play in some browsers. Eli tested it in Firefox and could not get it to play.

Captivate – total time: 47 minutes
3.38 MB
Using this software with the PowerPoint was very frustrating. The PPT kept freezing and I had to restart it at least five times. This resulted in a total of 92 slides; the PPT had only 33. After capturing the final slide, it was necessary to go through and delete the extra slides. The entire process took 40 minutes. In addition to requiring extra work, there were unwanted cursor movements, miscellaneous marks on the slides, and the program did not capture the audio recorded in the PPT. This would not be a satisfactory method for turning a PPT into a Flash movie.

Final Results

On this page, you will find links to the original PowerPoint files Eli created and the files Cheri created using the three different products.

- Presentation (.ppt) File size ( )
- Packaged Presentation (.pps) File Size ( )
- Saved as a web page (.htm) File Size
- Camtasia movie
- Captivate movie
- Wink movie

Discussion

The results were rather disappointing. Either the software did not work the way we imagined it would, or it would have taken more time and/or technical expertise to figure out how to make it work and produce a high-quality presentation. It is noteworthy that the Camtasia file was twice as large as the other two files. This will need to be investigated.

The next step in this experiment will be for Eli to troubleshoot and try to figure out how to import the audio into the movie files created by Camtasia and Captivate and how to resolve some of the other issues that arose. Time constraints did not allow her to do this for this presentation.

Conclusion

We came to the conclusion that screen capture software may work very well for software tutorials, but did not work well for this professor. Although Cheri is not a *techie*, she does have higher than average technical skills. The fact that she could not easily figure out how to get these products to work for her is a discouraging statement for the average instructor. Perhaps with more time and technical support, these products will be capable of fulfilling the promise of creating quality learning objects.

References

DebugMode, (nd). *Introducing Wink…,* retrieved February 15, 2005 from http://www.debugmode.com/wink/

Macromedia, (nd). *Macromedia Captivate for Higher Education*, retrieved February 15, 2005 from http://www.macromedia.com/resources/education/hed/special/captivate/

Mayer, Richard E; Heiser, Julie; Lonn, Steve. Cognitive constraints on multimedia learning: When presenting more material results in less understanding. *Journal of Educational Psychology*. Vol 93(1) Mar 2001, 187-198. American Psychological Assn, US

Moreno, R. & Mayer, Richard E. (1999), Cognitive principles of multimedia learning: The role of modality and contiguity. *Journal of Educational Psychology*. Vol 91(2) Jun 1999, 358-368. American Psychological Assn, US

TechSmith, (nd). *Create Video Tutorials, Software Demos and Presentations,* retrieved February 15, 2005 from http://www.techsmith.com/products/studio/default.asp