The Begetting of Information Literacy Tutorials: Third-Wave Tutorials for the iPod Generation

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Introduction

It seems like many libraries have created or are in the process of building an information literacy tutorial from scratch. While we applaud their efforts and utilize their quality products, we do not have the time or the technical expertise to replicate their work. However, with the availability of tutorials through open publication licenses and newer, user-friendly software, we can create similar results given the limited resources at our disposal.

Institutional Backgrounds

The University of Evansville (UE) is a private, Methodist-affiliated, liberal arts and sciences, university with about 2,400 students. All first-year students are required to take a two-semester "great books" sequence where faculty have the opportunity to introduce their students to information literacy skills through both online tools and face-to-face instruction. Using high-tech skills and low-tech software, Meg Atwater-Singer has modified several information literacy tutorials for student use.

The University of Southern Indiana (USI) is a state institution that serves approximately 10,000 students. USI Office of Instructional Technology Services provides faculty with access to software that individual departments, including the library, might not otherwise be able to afford, software such as Adobe's Breeze and Captivate. Susan Metcalf checked with IT Services and was able to benefit from user-friendly, high-tech software.

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In the Beginning, There was *TILT*

In 1997, the University of Texas at Austin began work on the *Texas Information Literacy Tutorial* (*TILT*). The tutorial "was designed for use at all sixteen component institutions: to ensure first-year students grasped basic research concepts, to best utilize librarians' expertise when in the classroom, and to provide basic information literacy skills accessible anytime and anywhere."[1] In three modules, *TILT* covered selecting appropriate information sources, effectively searching library catalogs and databases, and evaluating and citing information. Each module contained a game or online search component and was followed by a quiz.

The creators of *TILT* made the entire tutorial available for downloading through an Open Publication License (OPL). An OPL lets the signer use *TILT* material as long as it is properly credited; any future adaptations based on *TILT*'s content must also be released via an OPL. This innovation sparked a swarm of local customizations, including UE's I*Trail (now offline).

Another institution that took advantage of *TILT*'s OPL was Western Michigan University (WMU). They created *Searchpath* in 2001 and made it available through an OPL in 2002. Some of WMU's modifications included breaking *TILT*'s three modules into six, removing the frameset, adding more Flash animations, and deleting the non-Flash tutorial version.

TILT and *Searchpath* begat *inflite*, a third-generation information literacy tutorial developed at Indiana University-Purdue University Indianapolis (IUPUI) in 2003. The development team understood that research is a continuous process, with no single beginning or ending point. They designed *inflite*'s module selector to reflect this idea. IUPUI added more Flash games and designed the quizzes to be accessible through Oncourse, the campus' course management system. *inflite* was released via an OPL in 2003.

IUPUI's *inflite* begat *inflite* at UE. Atwater-Singer

signed *inflite*'s OPL in 2005 and modified the content to reflect UE's library, resources and branding. Atwater-Singer also signed *Searchpath*'s OPL in 2006 to incorporate WMU's Flash animation describing information literacy. To modify the tutorials, Atwater-Singer used WYSIWYG (what you see is what you get), low-tech software, a few, key internet services, and the technical skills she has learned as UE Libraries webmaster.

Design Over Time

When *TILT* was in production, frames were the newest feature in web design. Frames were developed by Netscape in 1996 and were immensely popular—so popular that other browsers began to support their implementation. The advantages of framing a website are uniformity of style, set navigation/menu choices and one unique web address (URL). The disadvantages of framing are printing problems, unclear site structure, inability to bookmark pages, and one unique URL for an entire website. When it debuted in 1998, *TILT* had different framesets for the modules and quizzes. WMU removed *TILT*'s modules from their framesets when it created *Searchpath*. This eased printing problems, allowed users to bookmark key pages, and made distinct URLs possible. *inflite* inherited a frameless *Searchpath* and continued to use this platform to drive its development.

The most daunting part of modifying any webpage was editing the coding. *TILT*, *Searchpath* and *inflite* were all written in HTML (HyperText Markup Language), which has been the internet standard. HTML told the browser how to display the content of a webpage. Since its standardization in 1995, HTML has evolved into XHTML (Extensible HyperText Markup Language), separating the content of a page from how it was displayed by the browser. This separation allowed for greater flexibility and accessibility for all web surfing devices. For example, if one authored a page once in XHMTL, it could be read by PCs, tablets, PDAs, cell phones, aural devices, etc. If one authored the same page in HTML, it would need different versions for each device or risk having some content not display.

Cascading Style Sheets (CSS) partner with XHTML to tell browsers how to display a web page's content. Once all of the font tags were deleted, Atwater-Singer used one CSS file to define how the entire tutorial was styled. For example, every page has its title tagged with a <h1>. This heading tag was then styled to be a certain color, font, size and alignment (left or center). When the webpage was linked to the CSS file, the styles were displayed as coded. This was an incredible time saver because if one wanted to change the color of the <h1> tag, one just had to edit one CSS file, not all 1,000 files of *inflite*. Atwater-Singer also validated the XHTML via the World Wide Web Consortium's service (http://validator.w3.org/) for compliance and to spot errors within the coding. Using high-tech skills and low-tech software, Atwater-Singer's customization of *inflite* was documented on a webpage called *How did they do that?*[3] Details of directories and pages that were edited and the changes made were listed there. Using this webpage as a guide, one could easily modify *inflite* for his/her institution.

Accessibility and Usability

Two very important considerations for web developers are the accessibility and usability of a website. Accessibility refers to a web page's content being available to everyone, especially people with disabilities. For example, if a page is styled in a ten-point font, someone with impaired vision will be unable to read the content. Accessible text is not expressed as a specific point size, but rather is styled as a percentage of the browser's default font size, which allows for scaling. Also, by offering non-Flash versions of key pages, *inflite* has made accommodations to users with slower internet connections.

Usability refers to how easy a website's design is to use, especially in regard to finding information or completing a task. A usability study helps the designer identify where users have problems with the interface (including the desire to leave the site completely), and how efficiently they can find information. Jakob Nielsen recommends that a usability study should have five users complete a series of exercises that represent common tasks.[2] There have been no published studies testing the usability of *TILT*, *Searchpath* or *inflite*.

Breeze and Captivate

Working from another perspective, using user-friendly high-tech software such as Breeze and Captivate (freely available on a trial basis), Metcalf created simple online tutorials in a few weeks. While Atwater-Singer serves as her library's webmaster, how might an instructional services librarian create equally dynamic online tutorials without HTML expertise? What follows is one librarian's experience using Breeze Presenter out of the box and with minimal training.

Breeze Presenter[4] is a Microsoft PowerPoint plug-in that works to create rich media online presentations with audio narration. One simply creates a set of slides and, from the Breeze menu embedded in PowerPoint, records audio for each slide, and then "publishes" to either the hard-drive, a CD or the online Breeze Server. Once published to the Breeze Server, a URL is provided as a direct link to the online tutorial. Using Adobe's Captivate[5] one can create interactive content by capturing screen shots of every mouse click made while simultaneously narrating the steps for the viewer. For example, this software enables one to create "live" video demonstrations of how to search a database or an online catalog.

Research Roller Coasters

The content and design of Pennsylvania State University's video tutorial *The Information Cycle*[6] was used to measure the success of employing the more user-friendly Breeze Presenter in place of Adobe's more sophisticated and expensive Flash, Fireworks and Dreamweaver. *The Information Cycle* was produced in 1999 and used the Columbine High School massacre to illustrate the different types of information that are generated over time by a single event. Using PowerPoint and Breeze, Metcalf created a 3-minute video

titled *Research Roller Coasters,* patterned after *The Information Cycle*, but updating the research topic to Hurricane Katrina.

How did *Research Roller Coasters* stand-up against *The Information Cycle*? Two content developers, one designer and one programmer were involved in the six-month project to produce *The Information Cycle*. Standing on their shoulders and borrowing from their basic idea, Metcalf was able to create a less sophisticated but similar video in about three weeks' time. While *The Information Cycle* is impressive, it is nine minutes long and some find the Columbine topic outdated. *Research Roller Coasters* was designed with user-friendly software, limited technical expertise and staffing, and was intended to be much shorter and adaptable. The PowerPoint slides were designed to facilitate updating the tutorial in less than an hour from Katrina to a different topic. Showing *Research Roller Coasters* as a short tutorial in the beginning of a fifty-minute library instruction session uses less time and affords a segue into class specific resources. Several faculty have been willing to show *The Information Cycle* prior to coming to the library for instruction. There are plans to continue to promote this practice, but it would be beneficial to have a shorter option available for in-class and online use.

For those interested in experimenting with Breeze, four basic features of the software are discussed below: recording audio, publishing to the Breeze Server, creating and inserting Flash video, and creating a simple quiz.

RECORDING AUDIO IN BREEZE

Recording audio over PowerPoint slides is easy. If one makes a mistake, one can instantly re-record over one or more slides. If one adds notes to the PowerPoint slide note field, these notes can be imported into the Breeze audio record interface to serve as a script. It is recommended that one use a high quality microphone. Using the same microphone, audio quality repeatedly sounded better on a desktop than on a laptop.

PUBLISHING BREEZE

After one has recorded the desired audio, go to the Breeze menu option in the PowerPoint menu bar (which shows up when Breeze is installed on the computer) and select the Publish option. Breeze instantly converts the PowerPoint file to a .swf Flash file and stores it by default on the computer's hard-drive, or, if selected, to the online Breeze Server. With the purchase of the Breeze software, the user receives a username and password and can log-on to the Breeze Server. Under Content, one will see the size, duration and URL which links to the presentation.

CREATING AND INSERTING FLASH VIDEO

When is Breeze not a breeze? Breeze proved to be user-friendly until it came to inserting video created with Microsoft Movie Maker. This video clip is different from the "live" video demonstrations made with Captivate as discussed previously. A video of a roller coaster interspersed with still shots of students involved in the research process was easily created using Microsoft Movie Maker. While converting this video from .wmv to .swf proved easy enough with conversion software, inserting the resulting Flash file proved repeatedly unsuccessful.

Problems inserting the Flash video included continuous video looping, the reordering of PowerPoint slides in the slide sorter, and the video did not reset itself back to the beginning unless the file was closed and then reopened. When switching from Turbine Video Encoder 2.0[7] to Sorenson Squeeze[8] for conversion, some of the previous problems were solved but others were created. A white box would appear in the video slide after one viewing, and the presentation would have to be closed and reopened. While the repeating looping of the Flash video was later solved by selecting the video's properties and changing Loop true to Loop false, the problems were far from solved. A frequent error message that appeared, only when specifically trying to insert a converted Flash video, was "… Breeze Presenter cannot load the recordings for all files. The recordings are not in the .ppc file."

Campus IT Services is currently in contact with Adobe Breeze to resolve these problems. Since the roller coaster video was created in Microsoft Movie Maker and then converted into Flash, there might be fewer problems if one started with Flash. However, Flash is a complex program and the point of this project was to employ user-friendly software. Microsoft Movie Maker, which is bundled with Microsoft Office, was readily available and simple to learn. At this time, the fifteen-second roller coaster will be used for in-class presentations only until the technical difficulties of embedding this type of Flash video in Breeze can be solved.

CREATING QUIZZES

Finally, one can readily create online quizzes in Breeze. There are several question types: multiple choice, true/false, fill-in-the-blank, matching, Likert, etc. At this time, quiz results cannot be emailed. For faculty who use a course content management system such as Blackboard, it is recommended that tutorial quizzes be produced in Blackboard, not Breeze. However, since librarians do not use Blackboard or grade student work, Breeze quizzes could be used by students as a self-evaluation.

CONCLUSION

Librarians with high- or low-tech skills can readily benefit from the information literacy tutorials described in this article. The building-blocks are available for free, either through open publication licenses or downloadable online trials. Metcalf and Atwater-Singer recommend a combination of skill, software, patience, confidence and bravado when crafting online information literacy tutorials for the iPod generation.

ENDNOTES

1. *TILT Project Development and Acknowledgements*. (n.d.). Retrieved April 27, 2006, from http://tilt.lib.utsystem.edu/resources/devt.html
2. Nielsen, J. (2003, Aug 25). *Usability 101: Introduction to Usability*. Retrieved April 27, 2006, from http://www.useit.com/alertbox/20030825.html
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4. Breeze's 15-day free trial at http://www.macromedia.com/software/breeze/

5. Captivate's 30-day trial at http://www.macromedia.com/software/captivate/

6. Pennsylvania State University Libraries. (2001) *Information Cycle* [online video]. Retrieved April 28, 2006, from http://www.libraries.psu.edu/instruction/infocycle/infocycle.html

7. Turbine Video Encoder 2.0's 30-day trial at http://www.blue-pacific.com/products/turbinevideo/download/default.htm

8. Sorenson Squeeze's 30-day trial at http://www.sorensonmedia.com/