

Rapid eLearning Development Tools

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Introduction

Over the last three years the Engage initiative at the University of Wisconsin Madison has produced a number of e-learning authoring tools for creating learning objects for incorporation into course web sites. The spirit of the Engage project has been guided by an open source philosophy with a goal of sharing these resources with other academic institutions. The intent of these tools is to enable faculty and support staff to rapidly and easily create media rich and interactive web-based learning objects to increase learner engagement with course content. The tools described in this paper enable the creation of interactive video modules, online lectures, web glossaries, case scenarios, concept tutorials and more.

These tools require very little technical skill to use and implement. Most of the tools are now available for download from the Engage web site while others will be available in the near future. Anyone interested in increasing the engagement and interactivity of online learners will find these tools valuable.

Engage Software Tools

This section provides a brief overview of each tool with descriptions of learning objects.

ConceptTutor Plus

This versatile tool can be used to create compact learning objects to teach key concepts and provide succinct topic summaries. The tool promotes effective conceptual learning through templates that include definitions, examples and non-examples, contextual information, and self-check quizzes.

ConceptTutor (Figure 1) uses an interactive tab structure to cohesively organize information about specific concepts or topics by incorporating structured text, graphics, audio clips, quizzes and Flash media.

Instructors can link these learning objects to online lessons or have students use the ConceptTutor authoring tool to construct their own knowledge maps as part of an assignment.

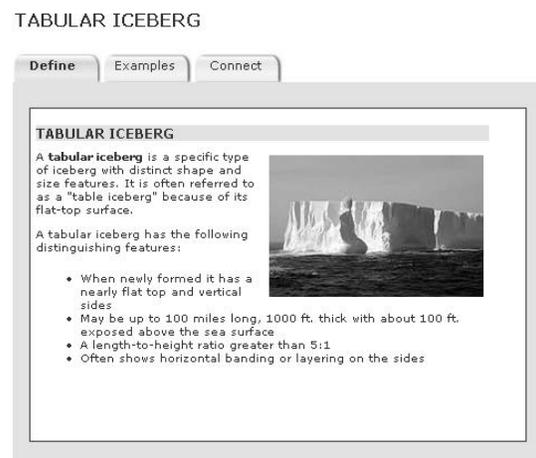


Figure 1: Concept Tutor - Tabular Iceberg

ConceptTutor learning objects promote learning through a tabular organizational structure, which can include, but is not limited to, the following units:

- **Definition:** simple definition of the concept
- **Critical attributes:** salient features of the concept that help learners discriminate and discern differences between this and similar concepts.
- **Examples:** written, pictorial, auditory, or animated expressions of the concept
- **Non-examples:** written, pictorial, auditory, or animated representations that are *not* the concept, but are so closely related that they are often confused with the concept
- **Context:** metaphor, elaboration, story, and visual diagrams that create connections between the new concept and the learner's prior knowledge
- **Self-Check:** simple quizzes to check the learner's understanding of the concept or topic

The ConceptTutor authoring tool provides instructors with flexibility in organizing content in a concise, structured, reusable and easy to deliver format.

eTeach

eTeach (Figure 2) is a presentation authoring and delivery tool that enables educators to synchronize and combine PowerPoint slides with a variety of instructional media and deliver these presentations on the Web. eTeach presentations can incorporate video, MP3 audio, Flash animations, resource hyperlinks and integrated quizzing.

eTeach removes the traditional limitations of in-class lectures allowing students to access lectures on demand. Lectures can be reordered, repeated and processed at a pace dictated by the learner.

The latest version of eTeach has been designed with accessibility in mind, and incorporates features to make the software accessible to all. The video track contains support for closed-captioning, which can be turned on and off at the touch of a button. This not only provides support for persons with hearing disabilities, but also for those students who simply learn better when presented with text in addition to audio. All PowerPoint images are also tagged according to accessibility guidelines.

The eTEACH authoring tool is currently a server-based application. User accounts and working spaces are available to University of Wisconsin System campuses. It is expected that in 2009 the eTeach authoring tool will be available as a desktop application.

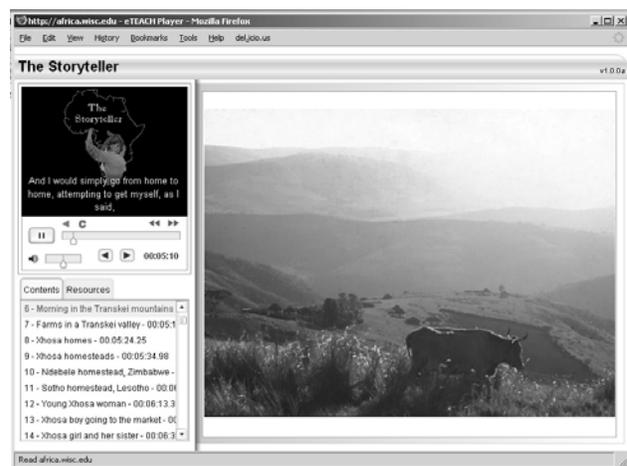


Figure 2: eTEACH - The Storyteller

GlossaryBuilder

Glossary Builder (Figure 3) is a tool educators can use to publish custom glossaries for incorporation into online courses and other web sites. GlossaryBuilder manages and organizes all of the terms and definitions and automatically alphabetizes them as they are added. Definitions can include text, images, bulleted or numbered lists, as well as links to additional web resources. Glossary Builder makes it easy to set-up and maintain glossaries for any subject on any website. Unlike glossaries that are grafted into course management systems, GlossaryBuilder creates a glossary as a portable learning object that can be added to any online course or web site.

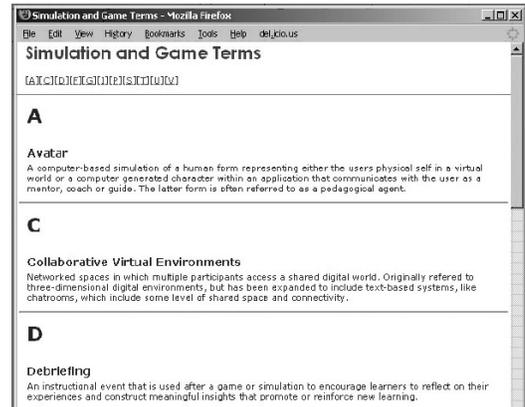


Figure 3: GlossaryBuilder

AudioTranscriber

AudioTranscriber is a tool educators, students, researchers and practitioners can use to easily add synchronized text to an MP3 audio file. The resulting output is an html-based learning object, removing the need for specialized media players such as QuickTime or RealPlayer. Web users can listen to an audio clip and view captions or additional textual annotations directly below the player controls.

This tool was originally developed for use in the field of Communicative Disorders to facilitate clinical study of patients with a variety of speech problems. The tool has a number of potential applications. It can be used to provide transcripts of audio commentaries to students who are deaf or hearing impaired. It can also help draw attention to or comment on specific portions of a speech or musical performance.

QuizImage

QuizImages (Figure 4) are interactive learning objects that help teach visual concepts and promote analysis of complex visual material. QuizImage learning objects help students learn and practice visual thinking skills, such as reading maps and graphs and finding visual metaphors in works of art.

When using the authoring tool an instructor creates “hotspots” in the image by entering text and drawing outlines. Detailed feedback and questions can also be added. The QuizImage 2.0 authoring software can build two types of learning objects.

- (1) **Quiz images** direct students to click on items in the picture, giving them feedback on their choices.
- (2) **Discover images** instruct students to find items in the image by rolling their cursor over the image, revealing hidden text.

QuizImages integrate into existing online materials or can stand alone as online activities. They can be used to introduce, elaborate or summarize content,

actively engaging students in the learning process.

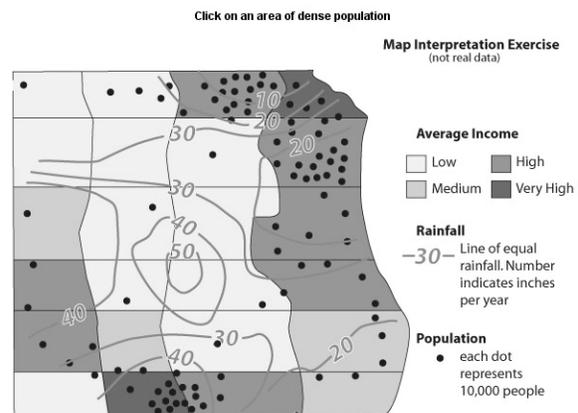


Figure 4: QuizImage – Map Interpretation Ex.

QuizVideo

QuizVideo (Figure 5) is a tool that can be used to add interactive elements to Flash videos delivered from web sites, CD's or DVD's.

This timeline-based authoring tool allows you to set time markers in a video file that trigger events such as:

- pop-up questions with feedback
- prompts to focus learner attention on important content within the video
- additional multimedia elements (images, audio clips and flash objects)

QuizVideo essentially enables you to easily transform passive viewing of video content into an interactive learning experience. Advanced users of the tool will be able to create branching videos with customized learner feedback.

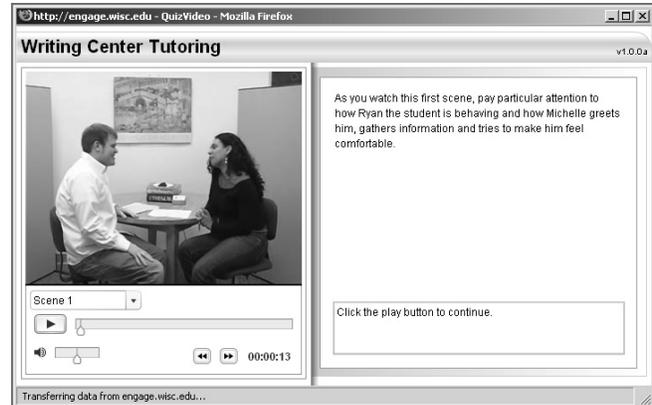


Figure 5: QuizVideo - Writing Center Tutor

Case ScenarioBuilder

The Case ScenarioBuilder (Figure 6) is a tool educators can use to present instructional content on the web in the form of cases, scenarios or simulations of real-world situations. It is based on a situated learning model where content is provided to learners within a relevant context or scenario. Learners can interact and explore content, make decisions and get feedback.

The case scenario builder tool provides a template for inserting content and making it come alive with interactivity. You can add textual elements, images, video, audio and links to resources as well as interactive questions with feedback.

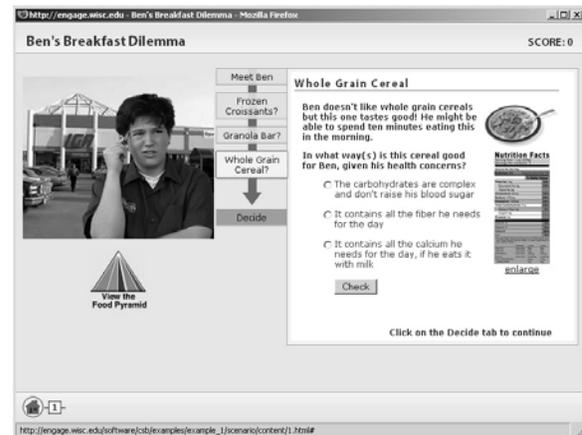


Figure 6: Case ScarioBuilder - Ben's Breakfast

The Case ScenarioBuilder authoring tool will be available in early 2009.

WorldCaption

WorldCaption is a tool for adding captions to a QuickTime compatible video, using a transcript of that video. While WorldCaption cannot be used to generate a transcript, it makes the process of synchronizing a transcript to video simple allowing quick and easy generation of captions.

World Caption accepts UTF-8 encoded text files, which means it can handle a wide number of languages - including languages with non-Latin character sets such as Japanese. WorldCaption allows addition of any number of tracks to the video. This allows the creation of caption tracks for several languages.

World Caption is free, but if you find it useful, please consider making a donation to the School of Journalism and Mass Communication. (from <http://www.journalism.wisc.edu/worldcaption/>)

Where to find the Applications

These applications, along with additional information about them, can be found at: <http://engage.doit.wisc.edu/> . If you have any questions, please feel free to contact the presenters.

About the Presenters

Les Howles: Les has over 20 years experience as an instructional designer, trainer, multimedia developer and e-learning consultant. He has worked in a variety of settings including corporate, government, medical and academic. Les is a senior e-learning consultant at the University of Wisconsin - Madison and works with faculty to create online courses and multimedia learning materials. He has a graduate degree in educational technology from the University of Oregon and undergraduate degrees in education and educational psychology.

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