

The Pedagogical Strategy for Using Camtasia

Camtasia is a powerful software program that helps instructors create digital content such as demonstrations, mini-lectures, and various types of tutorials. Instructors can record audio and/or video with real time screen captures of the computer desktop, thus allowing the integration of all digital elements in one file. After editing the Camtasia file, the final output can be encoded in a variety of file formats including Flash, Quicktime, Windows Media, and MP3. The creation of captions for 508 compliance is another important feature of the program.

One important pedagogical strategy for using Camtasia is to control cognitive load for new learners. When a great deal of information is presented at once and introduced too fast, the learner's short term memory is overwhelmed. And if the learner has no prior knowledge of the content then memory overload can take place. It is therefore important to give the learner some control of the content in order to minimize cognitive overload. By controlling the pacing and the amount of content presented, the learner can deal more effectively with processing the information. Adding a visual component to the verbal presentation can facilitate understanding as well. Studies based on the multimedia theory have suggested that students learn better when combining pictures with words (Mayer)

There is also empirical evidence that the verbal-only method does not always work so well. Our research shows, on average, that students who listen to (or read) explanations that are presented solely as words are unable to remember most of the key ideas and experience difficulty in using what was presented to solve new problems.(Mayer, 1997, 1999a, 1999b, 2001).

In contrast, consider a learning scenario that goes beyond the purely verbal. A student sits at a computer screen, calls up an on-line encyclopedia, clicks on the entry for "pump", and views a narrated animation that explains how a bicycle tire pump works.

The promise of multimedia learning: using the same instructional design methods across different media

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Research has also shown that the use of lots of graphics with lots of cues helps the first time learner. Camtasia is a good instructional tool that can help minimize cognitive load by providing :

- Repeated viewing of content
- Learner control of information processing—
 - a. stop, pause, rewind allows for the control of the time and rate of delivery;
 - b. easy access of content with a table of contents permits learner control of sequencing of content

- Information processing through the use of devices such as highlighting, pointers, and cues to direct learner attention
- Help for students with different learning styles by utilizing rich media (audio and video) –
- Instructor audio that personalizes the instruction and connects more effectively with learners
- More opportunities for students to reflect on the material and spend less time taking notes
- Close examination of steps and procedures presented
- Adequate time to process information for long-term retention
“Initial studies at Coppin State University show that lecture capture technology that allows students to view lectures online after the lesson can improve course retention rates as well as student grades (Briggs, 2007).”
- Learning beyond the classroom and maximize classroom time for individualized feedback in mastering content and focusing on deeper understanding of lessons
- Prerequisite knowledge, remediation, and advanced opportunities for advanced learners
- Content for learning anytime anywhere on the internet