

Enhancing the “Show and Tell” Aspects of Class Engagement Using Camtasia, a Low-Cost Video Screen Capture Replay Technology

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Abstract: A challenge for teachers is to effectively reach students with differing learning styles. Research demonstrates that effective teaching occurs when a teacher adapts his or her approach to the students' learning styles. Cheaper computers and inexpensive user-friendly software allow teachers to provide this kind of stimulation. This case study demonstrates how to use Camtasia to integrate video and audio elements to enhance classroom presentations and impact students by addressing various learning styles in one presentation.

Acknowledgment: The author wishes to recognize the University of Tennessee at Martin Development and Research Grant Fund for a grant received to participate in the 9th Annual Instructional Technology Conference and for a Faculty Development Grant to participate in a multimedia workshop to further develop his skills in Camtasia use. Additionally, the author expresses gratitude to Jessica Crawford for locating and copying many of the literature citations used in this paper.

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Introduction

The purpose of this paper is twofold: 1) to provide a brief overview of use of technology in the classroom with emphasis on the advantages of using video screen capture replay technology; and 2) to describe the process and practical application of Camtasia.

Recent trends suggest that teachers are increasingly becoming comfortable with the use of technology in the class room (Charp, 2003). Although teachers are becoming more comfortable with the technology, Ansell and Park (2003) point out that the U.S. Department of Education's 1999-2000 Schools and Staffing Survey shows that in 23 percent of schools across the country at least half of the teaching force was identified as “beginners” in using educational technology. Recent federal mandates may positively affect this rate since the “No Child Left Behind” Act of 2001 requires states to allocate 25 percent of federal technology dollars to staff development (Ansell & Park, 2003). Minkel (2003) has expressed concern that in the No-Child-Left-Behind era, too much emphasis is being placed on technology, rather than basic education noting that students need guides to help them make sense of information rather than students being enamored by the glitz of multimedia. Lookatch (1995) even suggests that most research showing that technology improves learning is based on flawed research designs. However, the trend toward increased use of technology within the classroom is continuing. Market Data Retrieval (MDR) data shows that in 83 percent of the schools surveyed at least half of the teachers use computers

daily for planning , teaching or both which is up from 73 percent reported in 2001 (Ansell & Park, 2003).

Rogers (2000) suggests there are three levels of new technology adoption for higher education including: 1) personal productivity aids, 2) enrichment add-ins, and 3) paradigm shifts. In most cases, paradigm shift has not occurred in higher education with faculty members and higher education institutions primarily focusing on points 1 and 2 (Massy & Wilger, 1998). In fact, the basic focus of this paper under this structure would be documentation of a tool for production of enrichment add-ins. Hall & Elliott (2003) describe an enrichment add-in as something used to enhance a class-room presentation.

Research has also noted advantages for students using computers in learning when compared to conventional methods including: higher test scores, longer retention of material, increased ability for individualized instruction, increased interactivity, better accessibility, and enhanced collaborative learning skills (Beerman, 1996; Bork *et. al.*, 2000, Bates, 2000) Although most research suggests positive support for use of computer-based learning, some authors have identified some disadvantages for students using computer-based learning solely as a teaching approach without the classroom to support the teaching. These do not relate so much to learning of the content, but to lack of socialization or feelings of isolation (Bork, *et al.*, 2000). However, since the focus of this paper is on use of Camtasia video screen capture replay technology as an enhancement of regular class instruction, rather than in isolation to the class, Bork *et al's* concerns would not apply in this setting. Even in cases where Camtasia is used after material has been covered allowing the student reinforcement recall on demand, the activity would not serve to isolate, but rather reinforce the students involvement within a class structure. For slower students, the recall on demand element might actually increase socialization since it would allow them to keep up with students who assimilated material faster.

Application of Video Screen Capture Replay Technology to Teaching

Anson (1999) suggests that contemporary changes in how students learn require that classroom instruction needs to be learner centered.

There appear to be three types of learners: visual learners, auditory learners, and, kinesthetic learners (Rogers, 2000). Visual learners are those who learn best through use of their visual sense and appear to be influenced by color, graphics and movement. Auditory learners learn best by hearing the material; while kinesthetic learners best learn by activity or “doing” things related to the educational activity.

McCormick (1999) notes that about 60 percent of contemporary students are basically visual learners. This means that a majority of the students in today’s class rooms would be positively impacted by use of video screen capture replay technology since it is predominantly visual. However, since the technology also incorporates an audio track along with the visual element, a teacher would also be able to address the needs of the auditory learner. If the teacher ensures that the use of the video screen capture activity is followed up by student participant involvement activities, the approach would encompass all three types of learners.

The video screen capture replay technology addressed in this paper is Camtasia Studio. This program captures what you display on your computer screen and saves the activity as a video file that can be placed on the internet, a CD-ROM or video tape (Instructional Technology Center Handouts, 2004). Audio files can also be recorded with the video output if a microphone is attached to the computer. Applications are numerous and could include: adding narration to a PowerPoint presentation; giving a visual tour of a website; demonstrating an application; or even walking the student visually through something requiring step by step procedural instruction (Instructional Technology Center Handouts, 2004). The components of Camtasia Studio include: a Recorder to record the activity on the screen; a Producer which allows you to edit the recording and the audio and save it in a variety of formats; an Effects component which allows you to add captions, highlights, icons, and images to the video to draw attention and add effect; a Menu

Maker which lets you take the audio and video and create an interface with a menu to you can burn to a CD-ROM; and a Player component which allows you to play back the videos and view them before manipulating and editing them (Instructional Technology Center Handouts, 2004).

Summary

The author is using Camtasia to record output for use in his journalism news writing classes to demonstrate format requirements for writing news releases. Additionally, he has created several “modules” for use in his web design class which requires the teaching of step-by-step processes. The author was also formerly a biology professor and recognizes the value of Camtasia in teaching classes where component identification is a crucial element. This could include classes such as histology where photographs of tissue could be displayed on the computer screen and the professor could move the translucent cursor to each component and identify what the student is viewing using the auditory feature of Camtasia. The same approach could be taken for basic cell biology and embryology. Educators in almost every field may recognize other areas where video screen capture replay technology could be applied. During the time the author has used this technology, he has found many benefits for the students. Students are able to replay modules on demand. Hence, slow learners do not feel left behind and can go back and study the material until they understand it. Additionally, the professor has been able to activate the recorded video which is projected for the entire class to see and physically move to the back of the room as the instruction takes place to observe students following along on their individual computers as processes are described. Being able to observe the students as they are following along enables him to identify any students who may be having difficulty and he can become proactive in dealing with problems before the student is so far behind that the situation becomes problematic.

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