CAMPUS 08 TECHNOLOGY

Implementation of Two Instructional Technologies at a Small Liberal Arts College

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ABSTRACT:

Belmont Abbey College implemented two instructional technologies, Sympodium 17" Interactive Pen Display (model ID 370) and SynchronEyes software 6.1, in computer labs in fall 2007. The technologies have helped instructors to deliver course materials more effectively and enhance the learning experiences of students. An additional 17" Sympodium was purchased later because of interest outside of the computer lab and placed in a standard classroom.

These technologies have enabled me (Gupta) to deliver instructions in computing and math classes more effectively. I use SynchronEyes to block Internet access and Windows games from all client computers or lock all computers so students can focus on learning.

Sympodium is interactive. In our lab setting, I (Gupta) face students and not the whiteboard which enables me to realize readily if a student is having problem with apprehending the concept. This learning environment helps with student attention and therefore retention of knowledge. It also benefits visual learners from large font, diagramming, and from presentation of material in various colors.

INTRODUCTION:

Belmont Abbey College is a small 4-year liberal arts college located in Belmont, N.C. about 10 miles west of Charlotte, N.C. It has a student population of about 1200. The College serves traditional age students in the Day program and working adult students in the Evening and Weekend programs. The idea of these technologies originated when Gupta saw them at a local high-school two years ago in the summer of 2005.

GRANTS:

Gupta and two Belmont Abbey colleagues saw a demo of these technologies given by one of the faculty at a local high school. Gupta communicated the functionalities and instructional benefits of these technologies to the Vice President of Academic Affairs and the President of Belmont Abbey College. Both administrators believed that these technologies would help deliver instructions more effectively. Gupta collaborated with the Office of College Relations at Belmont Abbey College and submitted a grant proposal to benefactors of the College. The College received a grant of $2500. Gupta also received $250 from the Board of Advisors grant at Belmont Abbey College.

PROCESS:

Makl arranged demos of these technologies in our Computer Information Systems (CIS) lab setting from two local vendors. Initially, we looked at Smartboard interactive whiteboard and SynchronEyes. We wanted to make sure that they would work well in our CIS lab which is a large classroom. From the demos we learned that the Smartboard interactive whiteboard would not work in the lab. Due to the large size of the classroom, the text appeared small on Smartboard interactive whiteboard and not clearly visible to students in the back row. Smartboard interactive whiteboard was about 72 inch diagonally; it would have been either mounted to the wall or placed on the wheels. If placed on the wheels, because of its large size Smartboard interactive whiteboard would be very cumbersome to move from the CIS lab to any other multimedia classroom on campus. We also looked at an alternative technology called Sympodium Interactive Pen Display. Sympodium is a tablet and is readily portable to any multimedia classroom on campus. Sympodium was more expensive than the Smartboard interactive whiteboard and both were the products of Smart Technologies (http://smarttech.com). Out of several local dealers for Smart Technologies, we chose The Whitlock Group of Charlotte.

Initially we purchased one unit of the Sympodium and the license for SynchronEyes software for 3 computer labs. The cost breakdown was as follows:

• Sympodium Interactive 17" Pen Display: $2195 (http://www2.smarttech.com/st/en-US/Products/Interactive+Pen+Displays/ID370/default.htm)
• SynchronEyes license for 3 computer labs: ($779 per lab license * 3) (http://www2.smarttech.com/st/en-US/Products/SynchronEyes+Classroom+Management+Software/)
• Total cost including tax and shipping: $4902

The grant paid $2750 and the remaining balance was paid by the Office of Information Technology. Later that year we purchased a second Sympodium 17" Interactive Pen Display.

FUNCTIONALITIES AND BENEFITS OF SYMPODIUM INTERACTIVE PEN DISPLAY:

Sympodium is an interactive presentation tool that is connected to a computer and projector. It is powered by the same software, Notebook, which is used by the Smart Boards. The software for the Sympodium is free and can be downloaded from the Smart Technologies Web site over the Internet. One can install the free software on an office computer or home computer.

Using the Smart Notebook software, instructors can create lecture notes by using either the keyboard and/or the digital pen. Instructors can create handwritten lecture notes in a series of pages on the Sympodium tablet using the digital pen in 3 colors (red, blue, and black) and save them in Notebook format for later use or editing. The buttons to use these colors are located on the Sympodium tablet. A variety of other colors are also available to choose from through the Notebook software.

The handwritten lecture notes can be printed as well. Instructors can use the cut-and-paste or the drag-and-drop features to organize their notes. Graphics, clip art or text can be imported into the lecture notes. The links to other Smart Notebook files can be attached to the lecture notes. The links to the Web sites needed for class lecture can be readily attached to the lecture notes.

The digital pen can be used as a mouse as well. The Highlighter feature allows the instructor to highlight text in different colors. The Screen Shade feature enables to hide and reveal the lecture notes on a page. Using mouse, the instructor can click and drag the screen shade in any direction hiding or revealing as much information as needed. The electronic Eraser allows the instructor to readily erase text and images. Instructors can annotate in digital ink in a Web page, or in the notes created in applications such as Word, Excel, and PowerPoint. The screen with the annotated Web page or the annotated notes can be saved for later use using the Screen Capture feature. The Area Capture feature permits the instructor to capture a selected image, a selected region of a Web page, or a selected part of the notes, and save them. The images are saved as objects.

The Notebook software Gallery contains thousands of images for use in various academic disciplines. The instructor can insert them in the lecture notes as objects. For instance, a math instructor can insert an image containing the graph template into the lecture notes, show students how to create a line graph using coordinate values, and then save it.

FUNCTIONALITIES AND BENEFITS OF SYNCHRONEYES:

SynchronEyes is lab control software. It allows an instructor to block Internet access or access to specific application program(s) from any, a select group, or all computers during lecture for students to focus on learning. Instructors can also lock any, a select group, or all students' computers during lecture. Instructors can create online quizzes

and give immediate feedback to students, chat interactively with students to reduce interruptions, and view any or all students' screens as thumbnails that can be enlarged in size. The software also enables the instructor to take control of any students' computer screen and walk him/her through the solution to a problem s(he) is having. Instructors can also broadcast an exemplary student's screen to other students to demonstrate points.

CONNECTIVITY OF SYMPODIUM AND SYNCHRONEYES:

The Sympodium interactive pen display connects directly to instructor's computer and projector. Instructors can then take advantage of the large projector screens and speakers in the classroom. In our classroom we added the 17" Sympodium (model ID 370) as a second monitor at the instructor station, leaving an instructor the flexibility of making use of the option or not. Navigation can be performed by using the digital pen or the mouse and keyboard.

This simple installation and the light weight of Sympodium allow us to readily move it to any of our other multi-media classrooms as needed.

SynchronEyes is a software-based solution with a control application at the instructor station (password protected) and client software on the lab computers. It works over the existing computer network.

SynchronEyes is currently installed in all three of our computer labs and **on** the library computers. The reference librarian can now monitor computer use throughout the library.

TRAINING:

The vendor held three training sessions on the various features of SynchronEyes and Sympodium technologies. We invited selected faculty, those who expressed interest in using them in their classes, to these sessions. In addition, we held three training sessions available to faculty, staff, and administration. Through these six sessions, we were able to demonstrate the features of these technologies to most faculty, the librarian, and some members of the administration. Online training is also available at http://smarttech.com/trainingcenter/online/index.asp.

APPLICATION IN THE CLASSROOM:

Sympodium Notebook software has enabled me (Gupta) to create handwritten electronic lecture notes in various colors using digital pen. I also revise these notes as necessary and save the updated version. The clarity and visibility of the lecture notes on the projection screen is excellent because of the large font and vivid colors. The screen shade feature is very useful in math classes. It allows me to reveal to students

only the problem that they have to solve, and not the solution. Also, I use different color combinations to illustrate math and computer concepts. With SynchronEyes, I am able to send quiet messages to students who play games without causing them public embarrassment.

NEXT STEP:

Gupta plans to publish in PDF his Fall 08 class notes on the campus course management application, IQ Web from Sungard Higher Education. These notes will be published online so they are available to students from on and off campus. Other faculty have noticed that making such materials available online has not impacted class attendance. In fact, it is a great help for all students, especially absentees.

The classroom instructor station in all multimedia classrooms this year includes the Notebook software so any faculty member can request the Sympodium for use in their class. Notebook is also now part of the faculty desktop for creation of materials in their office.

Fr. Chris Kirchgessner tried to make use of the Sympodium in his Theology classes in his standard classroom. He found that a good room configuration was critical. In his classroom the computer desk and Sympodium were in the front and to the side. Ideally the Sympodium should be located on the podium. If we can accommodate this he envisions increased use.

SUMMARY:

Gupta's is just one example of the current emphasis of the integration of technology into teaching and learning. Several other faculty are also experimenting with different approaches. In a Theology course, audio capture of the lectures via an iPod is in use. The lectures are then posted on a course web site. In Biology, two faculty are pre-recording portions of lectures to be placed as reference material in the course management system, IQ Web. A new position will be added this Fall to assist faculty with the adoption of technology and course redesign, and thus instructional technology will be in the hands of more than just a few early adopters. The college has shown its commitment by the selection of their SACS (Southern Association of Colleges and Schools) Quality Enhancement Project, a Learning Commons. Crossroads, Belmont Abbey College Alumni Magazine published an article on Professor Gupta's and Ms. Makl's experience: "Technology Takes Teaching To New Level" by Julia Bird, Winter|Spring 2007.