

## **Project Year**

2005

## **Project Team**

Kryisia Hudson, Faculty, School of Nursing, Undergraduate Instruction; Patricia Abbott, Faculty, School of Nursing/School of Medicine, Health Sciences Informatics; Holly Willis, Staff, Health Divisions Administrator, Welch Medical Library; Helena Blazun, Graduate Student, Mechanical Engineering Department, Whiting School of Engineering; Nola Stair, Staff, MSE Library, Center for Educational Resources

## **Project Title**

Enhanced Web-based Learning Environments for Beginning Nursing Students in 100.194

## **Audience**

Undergraduate Nursing Students

## **Pedagogical Issue**

This team needed to effectively combine information technologies with validated pedagogical models to improve clinical Web-based instruction and learning for undergraduate nursing students. Many users of Web-based Learning (WBL) systems simply posted existing learning material online without providing sufficient interactivity and personalized guidance for the students.

## **Solution**

The team believes that by incorporating indexed video segments (e.g., demonstrations of procedures or tasks) into the WBL systems, it will be possible to increase student interactivity with course content, leading to greater student autonomy, self-directed learning, and improved learning outcomes. One of our goals is to explore the use and indexing of innovative technical solutions while studying how to best incorporate them into course content. Simultaneously, the team will collect empirical evidence regarding the effectiveness of the enhanced WBL for nursing education. This team will transform a traditional introductory nursing informatics course into an interactive multimedia environment toolkit containing instructional content and resources available for students to access from anywhere, at any time.

## **Technologies Used**

Adobe PDF, Courseware (WebCT development), Graphic Design, PowerPoint/Presentation, Digital Audio

## **Project Abstract**

The course that we will be applying this technology to is 100.494. It is a required undergraduate course that teaches basic computer competency and informatics literacy. Students are taught how to interact with knowledge bases such as Pub Med and MicroMedix. In the current setup for the course, the group must be able to work at the designated pace set by the instructor during pre-set class times in the School of Nursing computing labs. We believe that this material can be better taught in an online

environment where students can directly access the exercises to gain the competency required, use a variety of multimedia approaches to learn the task at hand, participate in self-testing, and communicate more readily with other students and the faculty. In order to comply with ADA regulations, our goal is to provide a variety of content presentations for our course material. We plan to use a Hopkins supported web courseware platform, such as WebCT. The WBL will include traditional passive content presentations such as access to e-reserves for printed online articles, as well as animated PowerPoint with embedded audio, and indexed video. We have several measurable objectives for this project. We hope to enhance the ability of our students to access resources regardless of geographic location, and to foster collaboration and communication between students and faculty. We intend for the development of this course to enhance the relationship between the Welch Library and Hopkins students, hence, the addition of Holly Willis to our project team. The enhanced WBL environment will contain content and resources that will be perpetually available to students (and others) on an as-needed basis. We want to move the WBL, once developed, onto an open access platform in the School of Nursing, rather than having the materials available only to students currently enrolled in the course. Helena Blazun is our Tech Fellow applicant. She is a Mechanical Engineer who is completing her Masters' thesis and is focused in creating a WBL environment in pediatric nursing as her current scholarly activity. She has already begun preliminary work on incorporating video clips into the WBL as part of her thesis work. Helena will be very focused on this project as her main scholarly activity as part of her independent study course with the SON; therefore, we are certain of project completion within the summer 2005 time frame. Helena will be housed in our office suite, guaranteeing close proximity with faculty. The resources that will be developed in this project may be released to other disciplines on the Medical Campus. A web module such as the one we propose to create could be not only re-used continually by our students as needed, but has the potential to be used by Hopkins staff nurses as well, and other health professional students.

A video of Krysia and Patti's presentation (time=3:24) is available here:

[http://mfile.akamai.com/7111/mov/streams1.nts.jhu.edu/~jhumedia/cer/tfvideos/6\\_nursing\\_full.mov](http://mfile.akamai.com/7111/mov/streams1.nts.jhu.edu/~jhumedia/cer/tfvideos/6_nursing_full.mov)