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—Cynthia Liotta, Assistant Professor and Program Director for Radiologic Sciences

At Gannon University in Erie, PA, the fall of 2007 not only brought new students, but also new teaching methods to the renowned Radiologic Sciences program that helped drive new innovation and interactive learning in the classroom, and across the campus.

Challenge

For over 60 years, teaching future radiologic technologists has centered on the examination of x-ray film, reaching a diagnosis through careful study and piles and piles of paper. The professors at Gannon University wanted to change that and began to re-examine their teaching practices to find a way to make the Radiologic Sciences program interactive, filmless and eventually paperless.

Cynthia Liotta, an assistant professor and program director for Radiologic Sciences, began working with her colleagues and the University's IT department to determine how new technologies could help them in this effort. "Our program is about implementing technologies and practices that our students will be accustomed to seeing day in and day out in the hospital or medical facility. Without having those tools to help us teach, we're not properly preparing the next generation of radiologic technologists."

Liotta recalls that the top recommendation from IT was to utilize Tablet PCs. The Tablet PC would allow the professors to create more interactive lessons and make them filmless, though for any university, purchasing a new technology can be a very costly initiative. "Costs, as well as portability and size, were two challenges in deciding which technology to integrate into the classroom," said Liotta. "The technology behind the Tablet PC, the pen and digital inking capabilities is what made us realize this would have great Return on Investment for us."

featured product

Portégé® M750



Solution

The professors and IT staff chose the Toshiba Portégé® M750 Tablet PC. With the start of the fall 2007 semester, two courses integrated the Portégé® M750 Tablet PC into lesson plans, and by the time fall of 2009 rolled around, they began using the Tablet PCs throughout the entire Radiologic Sciences curriculum.

Any time a new technology is introduced into the classroom, the learning curve for both professors and students can be tricky, but at Gannon, the professors were able to gradually convert a lot of the film and materials into digital format that made the transition easier for students when they began to access the lessons and information from the Tablet PC. The digital inking capabilities on the Tablet PC enabled students to access information more quickly and relay information back faster to the professor. By having the pen capabilities, students could write on images during the lessons, creating better visualization and interactive communication—helping professors give better feedback and direction. With the easy transition, students became so accustomed to the accessibility and ease of use that they began utilizing the Portégé® M750 Tablet PC outside the classroom for other university work.

Results

The ROI was realized by the professors when they found they were saving more time with logistics, handouts and film coordination in the classroom—enabling them to spend additional time on lectures and 1:1 learning. Suzanne Sturdivant, a professor in the program, was able to develop a progressive tutorial—a set of materials including a PowerPoint® presentation with voice over and pre-tests that students could access on their Tablet PCs, read through and take notes and respond to prior to class (saving valuable class time). Students were then able to explore additional content during the lesson with Sturdivant they would have otherwise skipped over had they not integrated the Tablet PC. Another professor in the program, Ronald Cuzzola, recently added a Virtual Control Panel and Webcam feature that allowed students to further interact with him during the lesson, provide virtual feedback on the images they saw and receive more intimate instruction on challenging images they examined.

And when it came time for exams, students were thrilled with how it changed the testing environment. Before, students would need to rotate from station to station to examine film, increasing their anxiety over whether they could finish in time and not

have their peers lining up behind them to complete the station exam question. Now that the film has been converted to digital images, the students can take their exams from their Tablet PCs, remaining stationary and creating a calmer testing environment. Students also loved the accessibility. They are able to download more images from the Tablet PC directly to their desktop for further study and examination. Knowing they have the power to view the images anytime, anywhere, they feel they're now better organized and have more control over their study time and habits.

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Other programs around the university have started to examine the possibilities of integrating Tablet PCs into their classes. To help facilitate this, a Tablet PC subcommittee was established to educate others about using the tablet in the classroom.

Accomplishments

As the faculty and students began to see their learning environment evolve since that fall, the rest of the university community took notice. The Radiologic Sciences program was recently awarded two awards: The President's Award for Excellence in the Use of Technology and the Gannon University Green Award, highlighting the program's ability to eliminate paper usage. For Liotta, the Tablet PC is only one piece of the puzzle for advancing the Radiologic Science program and Gannon University. In the months and years to come, faculty and staff are determined to seek out new and innovative technologies to fuel their ongoing goal of bringing innovation to the classroom. Professor Cuzzola is in the midst of introducing a way to utilize the Tablet PC to incorporate video of patient care scenarios, moving away from still digital images and allowing students to provide direct feedback to the instructor on the videos through the Portégé® M750 Tablet PC. When future students come to Gannon, they'll be pleasantly surprised to learn how much this university in Erie, PA has evolved into an innovator in education using unique technological applications.



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