When The George Washington University (GW) was ready to launch its School of Nursing, Dean Jean Johnson and her team knew the program had to be extraordinary. A second nursing shortage in the United States was on the horizon as demand for qualified nurses was expected to increase 26 percent by 2020. The GW School of Nursing needed to attract the best students and to continue the University’s tradition of shaping leaders in their specialty for the future.

The School of Nursing team joined forces with GW’s Academic Technologies group to develop an active learning space that met the shared goals of each department. P.B. Garrett, Associate Provost and Chief Academic Technology Officer, led the team responsible for choosing the technology to support the program’s goals. “Selecting the appropriate instructional tools that enhance the pedagogical environment is our first priority in making learning space design decisions.”

From the beginning, there was a synergy between the two departments’ visions. “Nursing lab activities used to be giving injections on oranges – not a very realistic way to learn crucial skills,” said Johnson. “Today, you cannot be an effective nurse if you are not well-grounded in science and technology.”

The result of the collaboration was a state-of-the-art simulation lab. The lab offers mock emergency, hospital and wellness rooms that provide real-life environments for hands-on student learning. Patient mannequins mimic interactions – they move and speak, have heart/lung sounds, and even give birth. John Arpino, Assistant Director of Audiovisual Engineering Research and Development in Academic Technologies, led the team that implemented the technology. “From a classroom design perspective, it was essential that the simulation lab was as realistic as possible. Therefore, the technology had to be seamless and robust.”

From the classroom to the bedside, students learn practical and critical thinking skills in low-risk lab situations that reduce anxiety in working with real patients while preparing them for future careers. Patty Davis, head of the GW Nursing Skills and Simulation Lab, said, “We can create a realistic environment and give students the opportunity to actively learn – the more senses they are using, the more they are going to remember and utilize in their critical thinking skills.”

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- DR. JEAN JOHNSON
DEAN AND PROFESSOR
GW SCHOOL OF NURSING
Using Video to Assess Student Performance

The simulations created opportunities for hands-on learning, but assessment of student performance presented challenges. Students often disputed their individual performance despite missing key steps when dealing with patients or on a particular procedure.

Now, all simulations are recorded by Echo360 and shared with the student for assessment. “Video is so important to student learning. They often don’t recognize what they did right and wrong, and verbal feedback doesn’t have the impact,” Johnson continued. “The Echo360 video recordings are an integral part of the simulations, taking them to a new level.”

Academic Technologies captures lectures in classrooms across GW’s campuses, supporting both online and face-to-face courses using Echo360. Adding video was an obvious solution to the challenge the Nursing School was facing with assessment. “In today’s world, technology should enhance, rather than disrupt, teaching and learning. It is like air, it should be something that students and instructors do not worry about, but know it is present and fully functional at all times,” said Garrett.

The ‘Ah-Hah’ Moment

The main campus of GW is located in the heart of Washington, D.C. The urban location means the University is faced with space limitations on a daily basis. Echo360 technology was used to extend the reach of over-enrolled courses through distance learning. The same concept was brought to the School of Nursing.

During a simulation, it was important to limit the number of students in the simulated hospital rooms to replicate a patient care environment. Johnson and Davis wanted to increase the number of students benefiting from certain simulations, including birthing scenarios. To accommodate this need, Academic Technologies implemented Echo360 live webcasting to other rooms in the nursing building. Students watch and participate live, using student engagement systems to respond to questions and even suggest next steps to their peers.

“I’m a nurse, not a technology person. By working with Academic Technologies, we are able to create a more effective space that encourages us to be more adventurous because we have the support we need,” said Davis. “Best of all, I can see the ‘ah-hah’ in the student’s eyes – it starts to come together for them and critical thinking pathways start to develop.”

Garrett agrees. “We’ve moved from teaching the conceptual to the concrete. The experiential learning at the GW simulation lab is engaging and active, but without the intimidation factor. With Echo360 and our other technology, it’s just like you are in a hospital.”

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ASSOCIATE PROVOST AND CHIEF ACADEMIC TECHNOLOGY OFFICER
THE GEORGE WASHINGTON UNIVERSITY