

# CASE STUDY GRAND CANYON UNIVERSITY

## Overview

- University needed a better way to teach simulated skills to students
- New solution works with medical mannequins and records results
- Teachers and students are able to observe and learn from one another
- University has saved money on medical mannequins and improved students' skills

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In an effort to elevate the student experience, Grand Canyon University piloted an independent study on effects and best practices of medical simulation labs in the educational environment. As a result of the study, the university hired a Manager of Simulations and Labs, John Witwer, to oversee the development, implementation and procedures to run this evidence-based simulation lab program for seven sites, serving over 1,500 students within Grand Canyon University, College of Nursing and Health Care Professions. John looked at various products and integrators to help design, install and maintain the simulation labs. John wanted a system that would record students in the simulation and skills labs so their videos could be referenced later to improve student outcomes through simulation critique, self-reflective review, and inclusion into electronic professional portfolios. IDS was chosen as the partner not only for previous experience with simulation labs at other similarly sized programs, but also because IDS offered a turn-key solution.

## Action

IDS installed a VBrick Video streaming and recording solution as well as AV room design and integration for the labs. Cameras, microphones, and speakers were strategically installed into each suite in order to enhance student experience. "One of the things that IDS is really great at is workflow. I told them how the flow was supposed to happen, and they were able to complete installation based on that description," said John.

In addition, specifically programmed AMX touch panels outside each lab are used to control systems within the simulation labs. This allows students to gain access to the labs and begin recording sessions. Facilitators can use the panels to control the cameras and microphones from the control room – which allows them to personalize the experience for each student and change the circumstances on the fly. Once a session is complete, the recordings are sent to VBrick Portal servers for storage and management of all video files.

# Results

The labs are primarily used by nursing and athletic training students to practice simulations and skills. Simulations are manufactured scenarios where students interact with a plastic mannequin in a high fidelity, robust way. Using the specially placed cameras, speakers and microphones, the facilitators in the control room can see, hear and speak directly to the students in the simulated hospital room. Skills are when students schedule time in the simulation lab so they can practice very specific skills like placing IVs. The student schedules time with the lab manager to complete the work. Students will also record their sessions so they can be reviewed by instructors or themselves on-demand.

Groups of students will do team nursing with observers in another room watching live video streams on mobile carts in the same way the facilitator may see it from the control room. The students then switch so everyone gets a turn in the lab and being the observer. As a result, the students can have a much richer and greater experience by increasing hands-on experience and by allowing each student to observe, simulate, and debrief after the session.

However, uses for the system go well beyond simulation capabilities. Using video, strategically placed cameras, and microphones creates a way to save on the investment for mannequins. The university doesn't have to purchase specially designed medical training mannequins but can use standard mannequins instead and still get great value because of the connectivity and communications. "Medical mannequins are \$75,000 and instructors can talk through its head. We don't need that with our setup," said John.

The recorded videos have multiple uses. Subjective performance of skills and critical thinking can be analyzed by the facilitators from the control room. The value of having an archived asset that shows actual performance helps in the grading process, allows students to review their performance, and can be reviewed in detail with the instructor.

Videos become added to a student's electronic portfolio for them to use after graduation later when applying for jobs. The videos can be uploaded to social media or used on personal websites, too.

"Adoption was in phases but has been seamless. Everyone was very excited for the new capabilities and the use of video archiving. Facilitator and students are very satisfied," explained John.



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