University Transforms Educational Offerings with Video Conferencing

University of Colorado Colorado Springs uses TelePresence to provide rural communities with increased educational opportunities.

Challenge

A critical issue for southern Colorado is the need to retain quality nursing talent in local, rural communities. With the majority of nurses from rural areas migrating to either Denver or Boulder for their educational training, never to return home, local clinics in southern Colorado are left short-staffed. As a major hub to dozens of community colleges throughout Colorado, the University of Colorado Colorado Springs (UCCS) long sought to increase its educational offerings and bring them to the surrounding area. In 2010, UCCS planned to further its distance education initiatives, with a concentration on nursing education, and provide each student in southern Colorado with standardized educational opportunities, regardless of location. However, because UCCS is made up of three campuses (one university and two community colleges), it was in desperate need of social virtualization to reach its target population.

Nationally populations are aging while being supplemented by hyper-local bursts of growth. Faced with this trend, communities need to use networked information to create new services and opportunities. UCCS recognized this necessity as a critical component of building out its distance education program.

Dean Nancy Smith of the Beth-El College of Nursing at UCCS explains the dire circumstances faced in Colorado: “In 2010, there was a national imperative to transform nursing education by the Institute of Medicine. Within southern Colorado, there is a shortage of nursing faculty estimated to be between 15 and 20 percent, and there’s a rapidly aging population who will require more healthcare services.”

UCCS had to think creatively about cost containment while increasing access to education resources. Leaders in the UCCS IT department knew that they had to find a solution that would create a broader learning environment than just a single classroom. Creating new services and opportunities for students was the only way UCCS could improve clinical care within the state.

“The cries for quality care came from our surrounding clinics, our nursing programs, and the students at UCCS,” says Jerry Wilson, CTO and executive director of IT for UCCS. “Southern Colorado clinics were short-staffed and facing an absent workforce. In addition, students migrating to Denver to get their degrees were not returning. UCCS knew it had to create the infrastructure to train people needed at the local clinics.”

Executive Summary

University of Colorado Colorado Springs
- Industry: Higher Education
- Location: Colorado Springs, Colo.
- Campus Population: 9,100 students

CHALLENGE
- Provide real-time classroom opportunities to students in rural communities
- Retain qualified nursing talent in rural communities, and identify future workforce candidates
- Increase reach of nursing faculty, who are limited in number and location

SOLUTION
- Expand distance education initiatives using Cisco TelePresence
- Create workforce infrastructure for staffing at local clinics
- Optimize resources by sharing staff and saving money on meetings

RESULTS
- Retained talent in local communities through specialized distance learning
- Expanded student base by increasing range and reach of education programs
- Reduced operational costs via virtual meetings

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Jerry Wilson
CTO and executive director of IT at the University of Colorado Colorado Springs

Solution

In 2010, UCCS technology leaders observed a Cisco TelePresence® demonstration and immediately recognized the potential to harness the solution to address the labor shortage. The university engaged Cisco directly on using TelePresence: “After seeing what TelePresence could enable, we knew that it could realize our goals and meet them completely,” says Wilson. “When we saw the technology in action, the wheels started turning. Here was a tool we could use not only as an enabler, but as a full solution for our educational needs.”

UCCS moved forward with deploying Cisco® TelePresence. Upon installation, Wilson and the IT department realized that the Cisco solution was not only a meeting tool, but also a teaching device. Cisco TelePresence is a face-to-face collaborative tool that delivers a lifelike, real-time communications experience through an advanced set of audio and video technologies, using an IP phone interface. The university initially started with TelePresence on its Colorado Springs campus in July and quickly spread its usage to Lamar Community College and Otero Junior College. TelePresence was immediately leveraged for nursing education across all UCCS campuses, which provided an improvement in accessibility that had never previously been available. The solution was also a cost savings for UCCS. It could now save money with virtual meetings, as opposed to spending time and funds commuting to see students and faculty on alternate campuses.

For students within the nursing program at UCCS, using TelePresence meant their classrooms were outfitted with full two-way high-definition (HD) video screens streaming live classroom content from the Colorado Springs campus. Learners in Lamar and Otero were also able to participate in real-time emergency room simulations, interacting with instructors and other students in three locations simultaneously. This true next-generation learning was a step beyond traditional distance learning for UCCS, creating a classroom extension environment.

“There are two unique ways we’re using TelePresence,” says Smith. “The first usage is the sharing of nursing faculty. Cisco allows us to use one faculty member for three classrooms of students, an optimization of a fragile resource. The second benefit is providing access to rural students, who were previously challenged by a five- to six-hour commute”

With the addition of TelePresence, UCCS can reliably collaborate with students, educate them regardless of their location, and prepare them with the skills needed to continue their professional work locally.
Results

UCCS underwent a major technology platform shift to better serve the needs of its learners, in particular the satellite students taking courses at Lamar and Otero. By implementing TelePresence and offering tailored, localized nursing programs at community colleges, UCCS was able to attract and retain the area’s best and brightest minds, particularly in the field of nursing. This type of access was not possible before Cisco entered the picture. With private networks of information flowing in real-time between the Colorado Springs, Lamar, and Otero campuses, UCCS is able to better serve the greater community.

For example, teaching electrocardiogram (EKG) interpretation is a basic skill taught at the Beth-El College of Nursing at UCCS, and critical to the success of nursing students. “One of the special moments that Cisco allowed for us in the EKG class was to use simulation,” says Sue Davis, a director at Beth-El. “The use of simulation through TelePresence has allowed my entire class to participate simultaneously as active participants or observers.”

With TelePresence, the IT department at UCCS was able to break down barriers and change expectations across the university. Before implementation of the Cisco solution, the IT department heard an endless string of voices unsure of adopting advanced technology. Upon installation, Cisco TelePresence changed perspectives by humanizing the product and providing immediate results for the end-users.

In addition to enabling strides within the nursing program, UCCS’ engineering course has also benefitted from the new technology. Teams engaged in engineering can now collaborate live on building robots and conducting robotic testing over the live portal.

Bob Kressin, instructor of electrical and computer engineering at UCCS, has seen substantial results within his introductory course on robotics: “Fears were dispelled immediately upon using the technology. Cisco did a fantastic job setting-up TelePresence. From the very first session, we had no problems using the solution and were able to instantly integrate our students in new ways.”

Cisco continues to build new horizons for UCCS through the incorporation of TelePresence with traditional course models and other distance learning endeavors. The university is now initiating discussions on bringing some of its specialized course education into K-12 classrooms to educate younger learners on real possibilities for education in their community. “I think it’s going to permanently change the way we deliver education,” says Wilson.
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Next Steps

UCCS is in the beginning stage of an official second phase with Cisco TelePresence. The university plans to deploy the Cisco solution at over 10 different institutions and as many as 300 high schools once plans for K-12 integration are approved. By sharing resources, UCCS believes that it can prepare and educate learners in southern Colorado high schools, inspiring them to find employment locally following their graduate degrees. In this way, Cisco is helping UCCS to connect and engage directly with local communities, achieving its goals in community education.

For More Information

To find out more about the Cisco TelePresence, go to: http://www.cisco.com/go/telepresence.