TELEPRESENCE: BEYOND FOUR WALLS

Telepresence solution bridges the gap between MNSU's sites while enhancing the overall learning experience.

It's no secret that harsh Midwest winters can pose momentous challenges for travelers, including commuting college students. But at Minnesota State University, Mankato (MNSU), the recent implementation of a high-end video conferencing solution has not only mitigated the impact of snow flurries and ice storms, but has also significantly enhanced the learning process.

Students at MNSU are now able to effectively be in two places at once, thanks to the deployment of telepresence technology. A popular application of video conferencing, telepresence provides a higher level of technical sophistication and improved fidelity of both video and audio, enabling participants to feel as if they are present at a place other than their true location.

"It's like taking a big-screen TV and setting it right in front of your desk," explains Bryan Schneider, IT director at the 16,000-student MNSU. "The person on other side is almost lifelike in size. You can see one another, look into each other's eyes, and with the high-definition audio and video, you truly feel like you are sitting in the same room with them. It's very interactive."

MNSU is among a growing number of higher education institutions turning to video conferencing in order to accomplish a wide range of goals — from improving instruction to engaging remote students to increasing access to curricular content — all the while delivering cost and productivity savings for students, faculty and administrators.

"We're seeing a very strong interest in video conferencing overall, with telepresence a subset of that category," says Melanie Turek, industry director at the business research firm Frost & Sullivan. "It's a great way for universities with multiple campuses to have students at one location take part in a class at another site, with just one professor. It provides them with a very real-world experience where they can almost fool themselves into believing

Bryan Schneider, IT Director
Minnesota State University
Mankato, Minn.

that they are sitting across the table from the person they're talking to."

Improving the Learning Experience

Indeed, as today's higher education institutions are increasingly challenged to prepare students for the global economy, fierce competition and escalating expectations are driving the need for video technologies. At the same time, many educators are seeking a cost-effective approach to bridge the distance between metropolitan campuses and outlying satellite locations. As a result, high-definition video conferencing has become a mainstream communication tool, encouraging new levels of face-to-face collaboration.

"The kinds of students coming into higher education today are more technologically savvy and expect to be more engaged in their learning," points out Diane H. Coursol, Ph.D., professor of Counseling and Student Personnel at MNSU. "When we can answer that with this type of engaged learning process, they leave here more prepared. The learning curve is quick and powerful."

Installed at MNSU in May, the telepresence solution promises to augment the institution's offerings in numerous ways. For starters, the university is piloting the technology in six graduate-level classes this semester, delivering access to key curriculum to students at its satellite site 80 miles away in Edina, Minn.

Although MNSU previously offered a handful of distance learning classes using iTV, Schneider says the technology was not engaging for participants.

"It was very impersonal and students didn't feel like they were connected," he explains. "It was kind of like being a fly on the wall. There was a camera in the corner of the room and students could usually only see the backs of people's heads, or their faces were really small. It was hard to tell who was talking and often hard to hear the conversation."

Further complicating matters, the system was unreliable and difficult to use, which resulted in poor class participation.

"We sometimes had to cancel classes because the technology didn't work, and instructors said it was cumbersome to teach a class," Schneider says. "Although iTV is an important distance learning technology, we couldn't get our faculty on board. They just said 'we don't want to do this anymore.'"

Enter the Cisco TelePresence System 1300 Series. The system comprises a single screen with three cameras that can support meetings with up to six people in a conference room. Participation is made easy with automatic voice-activated switching, while built-in lighting produces high-quality, natural-looking video by eliminating facial shadows. Even more, all participants appear life-size on the screen.

"We were looking for a technology that would provide a high-quality, personal and immersive experience," Schneider explains, adding that another

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key criterion was that the product needed to be easy to use. "We wanted faculty and students to be able to press one button to connect everything — where it would turn on and just work. Cisco TelePresence seemed to be the product that would do all of that."

With two units deployed on MNSU's main campus and one in Edina, students are now able to attend classes that otherwise would have required hours of driving.

"One of the goals was to be able to offer more sections at our satellite site as well as the main campus," Schneider says. "Telepresence is really helping with accessibility, making it so students and faculty don't have to do a lot of unnecessary travel."

Expanding the Classroom

In addition to facilitating distance learning, the technology will also expand the university's recruitment and teaching opportunities by providing potential faculty members with the ability to teach from afar. It is also being considered as a means of attracting guest speakers and lecturers to the university.

"We are looking at getting speakers who are willing to talk to classes since they wouldn't have to come out to the campus," Schneider says.

MNSU also intends to interact with businesses that have deployed the technology at their own sites. "We can connect with different locations and simulate classroom training," Schneider explains.

Furthermore, thanks to MNSU's telepresence solution, companies wishing to send employees back to school to obtain higher learning degrees will be able to do so without their staff ever stepping outside the office building.

"They can stay right at their employment location and take classes onsite," Schneider says.

Going forward, Schneider envisions the technology being used for a wide range of additional activities, including student orientation, faculty job interviews, and advising and financial aid questions.

If MNSU's distance learning pilot program proves successful — as Schneider suspects it will — the university also intends to purchase bigger Cisco 3200 Series units that can accommodate larger class sizes at the satellite site. And ultimately, says Schneider, classes will be offered in both directions, with some courses originating in Edina.

"The more students we are able to put into classes, the greater the ROI of this solution," Schneider points out.

Cost savings and enhanced productivity were realized from the telepresence solution even before classes kicked off this fall, as administrators used the technology throughout the summer to host faculty and staff meetings between the two campuses, resulting in time and cost savings.

Although Schneider acknowledges that the potential financial rewards are tough to estimate this early, the telepresence solution is certainly expected to provide incentives both in cost savings and as a revenue generator with its ability to boost enrollment in classes.

"But the biggest benefit with telepresence is the experience," the IT director emphasizes. "A very important part of teaching is having students who are engaged, able to ask questions and feel like they are part of the class. The reason for telepresence is the real-life experience you get."

Turek agrees that telepresence solutions can significantly bolster the learning experience.

"It basically expands the reach of professors and content," she explains. "There really was no way in the past for them to access certain classes at all. Now they are getting a classroom experience that allows them to get access without having to travel or be at that campus."

Furthermore, the technology is gaining increasing appeal as an effective collaboration tool among professors, according to Turek.

"They are using it for research with colleagues and discovering that telepresence is a much better visual experience where you can meet face to face," she explains. "It improves the overall research process, as well as saves travel costs and time."

Enriched Connections

MNSU is already discovering these benefits. In addition to the telepresence units that are being used for distance learning classes, the university also purchased two Cisco TelePresence System 500 Series units, which are designed for two-person

BENEFIT SNAPSHOT: VIDEO CONFERENCING SOLUTIONS

When it comes to the advantages afforded by video conferencing, seeing is believing. Higher education institutions can reel in a wide range of benefits, including:

- **Improved access to curricular content:** Video conferencing can engage remote students while enhancing online curriculums, leading to increased retention rates for a university.
- **Cost and productivity savings:** The technology reduces travel expenses for students, faculty and administrators alike, all the while increasing productivity.
- **Extended reach:** Video conferencing empowers faculty and staff to expand their education reach and bring disparate communities of students closer together – a distinct competitive advantage over institutions that do not have the technology.
- **Better access for faculty and staff:** The technology provides faculty and staff with real-time, virtual seats at mandatory meetings and events that they could not otherwise attend, which can be a key factor in recruiting and retaining the best professors and administrators.
- **Increased expert interaction in any field of study:** With video conferencing, college students can interact and engage with experts in their field from all around the world, better preparing them for careers in their field of study and building relationships in the process.

interactions and have been deployed in the university's Counseling and Student Personnel department.

Coursol, who works in MNSU's doctoral program – which prepares counselors, counselor educators and supervisors – is relying on the technology for several uses. The solution has not only been instrumental in helping to train the student counselors, but is also taking center stage for a research project that assesses whether technology can be used to bridge the gap between counselors and clients at geographically distant locations.

"It's really important to be able to have eye contact, to hear a clear voice, and to be able to look at facial expressions and body language," Coursol explains. "What is really critical is to make it so the clients feel like they can be engaged with the counselor just like they are sitting face to face.

"What makes telepresence so powerful is that each room looks identical," Coursol continues. "When a client enters one room and a therapist enters another, it's as if they are in same room together engaged in a real counseling experience, just over a distance. The power of telepresence's high definition makes it a powerful tool that feels much closer to an actual experience than anything we've used before."

In a prior research study, the therapists viewed the experience differently than the clients, primarily because they had to worry about the technology, Coursol explains. "This product nullifies that," she says of telepresence. "It's seamless. I think this is going to work beautifully."

Coursol reports that colleagues and students alike have been "amazed" by the technology. "It's very powerful," she says. "They really feel like they are in same room."

Equally powerful was the ease of selecting and deploying the telepresence solution – a process made seamless by CDW·G, according to Schneider.

Professor Diane H. Coursol, Ph.D., discusses her research involving telepresence and the possibility of using it as a tool for clinical counseling.

"CDW·G visited our campus and let us know what type of units would work in which rooms," he explains. "They helped us find the space and fit the technology for the room and the purpose. Then they came onsite and did the installation and training for us."

Schneider says he has been especially impressed with the technical knowledge and level of expertise offered by the CDW·G team. "They do this all the time. They get in and install it quickly and when they walk out, it's all working," he says. "And that is very important."

Clearly, MNSU's new "room with a view" is facilitating widespread advantages.

"I think the magnitude of how this equipment can impact higher education is amazing," Coursol says. "We've only hit the tip of the iceberg with it. I think it's very exciting." ■