Going the Distance with TELEPRESENCE ROBOTS

Colleges are bringing telepresence robots into the classroom to better engage distance learning students and keep traditional lectures lively. **by Jessica Kennedy**

IN HIGHER EDUCATION, robots are taking over.

Telepresence robots are gaining popularity in college classrooms, especially as instructors look for new ways to connect with distance learning students.

"The primary users are the students, especially the student who is remote and lives in another part of the state, country or world," says Sara Broyles, communications lead at Double Robotics. "The use case for them is to simply attend class and be part of that real-time class community and engage in that real-time conversation."

Robotics users and experts, like Broyles, say that not only do students get a better learning experience from these solutions, but instructors' teaching strategies become easier for distance learning students.

Broyles says that utilizing robotics in the classroom is not as daunting as it sounds – all end users need is a spark of interest.

"Just give it a try," she says. "I know some customers go into it with the hesitation that, what if it doesn't work well, or the Wi-Fi connection might be tricky. But, we are so willing to always work with our customers to make it work for them in the best way possible and allow them to get the most out of it. Any schools that are one the fence about it, I always encourage them to give it a try."

Dale Gomez first expressed interest in a telepresence robot for Florida International University's (FIU) distance learning program. He felt that interactions between his Miami students and China students were lacking, and planned on using the robot to better engage them.

"We needed to move away from this monotone, standard conference system that we're all used to," says Gomez, IT Director at the Chaplin School of Hospitality and Tourism Management at FIU. With the robot, "you can roll right up to the students, you can talk to the students…and be eye to eye with them while they're sitting in their chairs. That's where we've been using it; so far, it's been great."

Colleges like Florida International University and Oral Roberts University are using telepresence robots to better engage their students.

Similar to FIU, Oral Roberts University (ORU) uses telepresence robotics to enable students to attend class on campus, no matter where they are located in the world.

"We're working on recruiting people to "come" to ORU from other parts of the world," says Mike Matthews, CIO at ORU. For example, "students from Russia can still live in Russia while going to ORU… When you have wireless technology, make sure it works flawlessly, but then innovatively use it to allow faculty to do what they do well, and get that spread around the world."

Matthews also says these solutions enabled his team to give a new meaning to the "flipped classroom," and bring it to a larger scale.

"When you think of the flipped classroom, we believe we've flipped our university and allowed it to be accessible to anywhere in the world," he says. "We do that because now we've got the infrastructure moving smoothly to the point we can trust the technology will work, faculty have confidence in it, and the president is bragging about it."

While institutions like FIU and ORU are using telepresence robotics to take distance learning to new lengths, Elaine Shuck says rising college students are starting to expect these technologies to be a part of their college experience.

"If you're a high school student or a community college student coming out of that age bracket where people are so use to technology, it's expected," says Shuck, Director of Education for Polycom. "It's expected for you to weave in all this technology so you don't miss anything, whether it's accessing content after the fact on-demand, or maybe there was something you didn't quite get and you can go back and use that technology to help you understand the concept."

TIPS TO HANDLING A TELEPRESENCE ROBOT

1) See what other colleges are doing

Shuck says one of her jobs is to connect colleges so that they can collaborate on technology-usage ideas. Before investing in a telepresence robot, Shuck recommends reaching out to schools like FIU to see how they're using the solution.

"We know that FIU has great success using these robots," she says. "My first suggestion would be to connect with FIU and find out what challenges they had, why they picked this particular robot, and what would they recommend in their scenario…Why not connect those dots so other institutions don't have to start at ground zero when they're trying to implement new technology? Do your homework to see who else is using it, and get connected."

2) Customize your solution

Matthews says utilizing the robotics solution grows easier if end users can customize it to fit their needs – even down to what they call it.

Matthews says colleges should work with their solution vendor to make sure they can customize the solution and brand it to their liking. That way, any confusion surrounding the solution can be reduced.

"I'm very careful as a CIO not to call too many product names out because it confuses the students," he says. "When students look at the robots, they see the name "Geo." The robots are named Geo 1, 2, 3, 4 etc. That's all I want them to know….Be careful that the vendors allow you the flexibility to brand it under your name, not their name. Make sure they've got some big successes under their belt, or they won't understand what you're trying to accomplish."

3) Make sure your infrastructure can support it

Before pulling the trigger on a new telepresence robot, Gomez suggests that colleges check their network to make sure it can handle the solution.

Gomez says FIU's network could support their telepresence solution, until they moved it into smaller spaces, like elevators.

However, after multiple rounds of testing, Gomez and his team were able to keep the robot connected, and up and running.

"Make sure it's compatible with your existing infrastructure, whether it's your Wi-Fi networks, security, and then of course the room systems as well," Gomez says. "We did test it…once we got into the elevator, it cut off, but once the doors opened I was able to connect back and maneuver the device. The great thing about it is it does give a presence in the room, a physical presence, and I think that stimulates the students, rather than having a talking head on a monitor."

4) Look for low cost

Unlike traditional videoconferencing solutions, robotics solutions can be inexpensive. This is especially important for colleges that are on a budget but still need to invest in a mobile or distance learning solution.

In the case of FIU, cost was a big factor before the school pulled the trigger on a robotics solution. Gomez says colleges should find a solution that fits their price point.

"Price is one of the biggest [factors]," Gomez says. "In terms of a room system, this device is not expensive; it's about $2,500 without the educational discount, whereas a room system could cost you up to $12,000, and that's just a system without any of the displays you'd need. In terms of price, it can be an affordable one."

5) Learn how to minimize device discrimination

Some robotics solutions are activated when end users connect to an app with their devices. For example, the Double Robotics app enables users to connect to its system via desktops, tablets and smartphones. From there, end users can manipulate the robotics solution with their personal device.

"Using our existing conferencing system, we could connect via a Polycom, but then because I'm coming in to the actual device itself, it doesn't affect my connection through the Polycom, and it comes in as a separate system," Gomez says. "What's great about it is that we can take a signal that's coming into an iPad on the far end and push it up on our room system using Apple T.V. So I could use my desktop, my smartphone, or a tablet to connect to the actual device. Then, not only am I connected to it, I also have the ability to move it around. I have full control over moving forward, backward, left and right, and then of course taking the pole the iPad is connected to and move it up and down. You literally have full control of the telepresence robot."