



Medical education partnership advances learning with collaboration technology

The Case Western Reserve School of Medicine and one of its programs, Cleveland Clinic Lerner College of Medicine, are piloting Microsoft Surface Hub team collaboration devices. Lerner students will work together on cases incorporating video, images, and written content. On the university campus, medical students and those from other disciplines will tap the device's potential for more engaging learning.

Case Western Reserve University

www.case.edu

5,800 employees

10,000 students



Cleveland Clinic Lerner College of Medicine, a program of CWRU

my.clevelandclinic.org

3,000 physicians and scientists

30,000 employees





Based in Cleveland, Ohio, Cleveland Clinic Lerner College of Medicine, a program of the Case Western Reserve University School of Medicine, trains physician investigators with a student-centered, collaborative approach to learning on the Cleveland Clinic campus. The university educates medical, dental, and nursing students among several other professional and undergraduate programs.

Business Needs

As pioneers in innovative medical education, Cleveland Clinic and Case Western Reserve recognize that as healthcare becomes increasingly collaborative and interprofessional, so must the preparation of students in the health sciences. Working together to develop a shared state-of-the-art Health Education Campus, Cleveland Clinic and Case Western Reserve University are raising the standards for training health professionals by integrating basic science, research, and clinical medicine in a progressive setting.

Dr. Neil Mehta, Associate Professor of Medicine and Assistant Dean of Education Technology at the Cleveland Clinic Lerner College of Medicine, describes how CCLCM is making this ethos a reality for medical students today. "We use a model called problem-based learning, or PBL," says Mehta. "Students work together in groups to solve a case over the course of a week. Each case has many parts, and students work on cases

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Reserve University

for two hours a day. They create their own learning objectives, share knowledge, and develop solutions collaboratively.”

Although CCLCM uses technology for collaborative experiences—such as using Microsoft OneDrive with shared OneNote notebooks—some of the hardware could be better. “We project cases from a laptop, and students take notes about their ideas and learning objectives on an analog whiteboard. Sometimes they take a picture of the whiteboard to refer to later, but then they have to add it to shared notebooks to use that content later when they’re researching their learning objectives,” says Mehta. “Ideally, technology should be intuitive and invisible and allow the focus to be on learning. And every minute students spend dealing with technology is a minute they could spend learning.” Although there are also digital whiteboards in each room, they are mostly used as simple displays because the whiteboard functionality is not intuitive.

Solution

CCLCM wanted to establish a technology environment that would better promote team-based learning. It decided to deploy two Microsoft Surface Hub team collaboration devices—one in a PBL room and one in a general conference room—as part of a pilot program sponsored by Microsoft.

Surface Hub is a large-screen HD touch device that provides integrated videoconferencing (powered by Skype for Business) and a digital whiteboard based on Microsoft OneNote. The device also has the Microsoft Edge browser, which students can pull up alongside the whiteboard in a split-screen view. They can view their PBL cases and other online resources in Edge, annotate them, and seamlessly import

them to OneNote. Working together on a Surface Hub device, students can take notes and annotate content using the OneNote whiteboard and save their work to OneDrive online storage to access later from computers and mobile devices. “By using Edge and OneNote during their meetings, our students, faculty, and staff can easily reference, share, and use the content later. In addition, Surface Hub supports WiDi and Miracast technology so students can wirelessly project from their own laptops and share their learning with the team,” says Mehta.



Case Western Reserve School of Medicine is using Surface Hub in its IQ program, a critical learning session where groups of eight second-year medical students and a facilitator meet regularly for a semester to assess and diagnose cases that are presented to them.

Brian Yuhnke, the university instructional designer, believes the Skype for Business functionality that powers the Surface Hub meeting experience could be well received by faculty and students. “Faculty may find it easy to participate whether they’re working from a field site or in the classroom,” says Yuhnke. On Surface Hub, built-in cameras and a

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microphone array that tracks voices to eliminate noise help give remote meeting participants a high-quality experience.

After years of cobbling together videoconferencing, digital whiteboards, and presentation solutions, Yuhnke also looks forward to a solution that brings these technologies together in one easy-to-use device.

“We’ve had to piece technical components together just to gain half the functionality that we’ll get with Surface Hub,” says Yuhnke. “When technology gets in the way, students revert to traditional learning methods. If we can eliminate that by having a device that just works, students will walk right in and get to work, too.”

Benefits

Collaborative, real-world learning

The IQ program within Case Western Reserve’s School of Medicine will use its Surface Hub devices to allow its participants to work closely together. “With the multitouch interface, several group or faculty members can interact at the same time, whether they’re standing at the Surface Hub or using a connected mobile device,” says Yuhnke.

Surface Hub devices will bring case content such as echocardiogram videos and magnetic resonance imaging (MRI) images to life, says Mehta, and he has plans to go further. “Instead of having students read a case, we could have a standardized patient [a person trained to take on the characteristics of an actual patient] join their group meeting via Skype for Business to discuss the case live, which would make it more like real-life care.”

Students appreciate straightforward, flexible technology

The ease of use and familiarity of Surface Hub will help all Case Western Reserve students focus more squarely on learning. “When students are given a piece of technology that they don’t have to think about, that’s when learning happens,” says Yuhnke. “Having our needs met seamlessly by one system will be a huge leap forward compared with our past learning environments. Students will walk into the classroom and immediately start to interact.”

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and Communications, Case
Western Reserve University

Seamless adoption has been notable in the IQ groups, where students use Surface Hub to take notes, interact with their web-based content, and share that information digitally. The adoption has been so natural that the students no longer use whiteboards during the IQ sessions.

The university anticipates that today’s technology-savvy students will also find their own additional ways to use the devices. “Once we give them the technological playground, they’ll come up with ways of using Surface Hub and ways of learning that exceed what we had in mind,” says Chris Sheridan, Vice President for Marketing and Communications at Case Western Reserve University.

Seamless connectivity brings healthcare disciplines together

In keeping with its team-based approach to medicine, the Health Education Campus will use Surface Hub devices to bring more disciplines into the PBL experience. “We want to develop cases that students from multiple programs can participate in,” says Mehta. “Through videoconferences, our students will be able to work together with pharmacy and nursing students to achieve learning objectives.”

Bridging physical distance with integrated videoconferencing

CCLCM and university students can use Surface Hub videoconferencing to work with almost anyone. “One advantage of this kind of technology is that by using it, we bring people closer together,” says Sheridan. “Everyone can see and speak to each other and compare drawings, ideas, and notes in real time, right on the screen.”

Microsoft Surface Hub

Surface Hub is a collaboration device designed to unlock the power of the group, powered by Microsoft software and services like Windows 10, OneNote, and Skype for Business.

For more information about Microsoft Surface Hub, go to: www.microsoft.com/surfacehub