



The Need: Delivering On Campus Quality to Online Learning

With the unemployment rate continuing to rise in this current economy, an increasing number of experienced workers are heading back to school to enhance their careers – or change careers completely to an industry with a more positive outlook – information technology (IT).

Virginia College (headquartered in Birmingham, Alabama) caters exactly to those types of individuals through a combination of traditional classroom instruction at 12 campuses in seven states, and online courses through Virginia College Online. More than 30 courses are offered in Virginia College Online's IT program, with students from across the United States working towards three degrees: a bachelors degree in management information systems, a bachelors degree in network management, and a masters degree of cyber security. All of these courses relate to certifications such as CompTIA's A+, Net+, Security+ and Linux+, as well as Cisco's CCNA, Microsoft's MCSE, the Systems Security Certified Practitioner (SSCP) and the Certified Information Systems Security Professional (CISSP).

For Tommy Whitlock, an instructor for 16 years and the IT program director at Virginia College Online since 2006, it is essential that his students receive real-world, hands-on training to prepare them for their careers. When taking those courses online, that isn't an easy task. "Imagine going into a hardware class that is taking place online and asking them to take their computer apart," Whitlock said. "I can't get it back together, they complain, but they can't reach me for help because their computer is down."

Then imagine how much they'd have to pay to install, for example, a real Cisco router at home. "You're talking up to \$12,000 to put your own router together to practice on," he added. "It just isn't possible."



The Solution: LabSim Builds Experience Online

Installing a physical lab for an online school is difficult and impractical as well. So in 2004, Virginia College Online went looking for a solution to make its online courses more effective. The school found TestOut, whose LabSim online labs present students with realistic, real-world scenarios that build valuable hands-on experience and skills.

The online labs in LabSim provide a robust experience that lets students experiment with a wide variety of IT functions. Students aren't limited to a prescribed pathway for completing tasks.



Nor are they simply faced with a series of screen images. Rather, students are able to freely work within a wide variety of virtual environments to accomplish their tasks and build their skills.

Virginia College Online students practice critical tasks Whitlock and other instructors have assigned them each week in a safe, simulated environment with operating systems such as Windows XP, Server 2000, Server 2003, Server 2008, DOS and Linux. LabSim also simulates a \$30,000 IT lab that lets students experiment with various computer hardware configurations from their own computer. And complex network labs provide experience with administrating, configuring and troubleshooting various network configurations and working with network components such as servers, clients, routers, switches and hubs.

Every lab exercise and scenario is tracked, evaluated, and scored for the students. At the end of each exercise, students are immediately shown their results with detailed feedback for each question, and if they are weak in certain areas, they can read an explanation of the correct methods to accomplish each task.

Whitlock also appreciates how LabSim's advanced reporting capabilities let him monitor the progress of his students online in real time. "These tracking capabilities are one of the best things for us instructors. Being able to tell when my students have actually completed the labs and how well they are doing makes grading so much easier and helps us to know where each student might need additional one-on-one instruction."

In addition to the online labs, LabSim provides instructor videos and practice exams for the students to review as part of their assignment each week. The videos teach essential concepts and demonstrate skills with slides and graphics.

"Being online, we can't put a long and boring video in a classroom and then tap the students on the shoulder when they fall asleep," Whitlock said. "So I love the fact that the LabSim videos aren't overly verbose and dry – they give the facts, demonstrate how to do the lesson, and then send the students off to do it. The course design, with short, valuable chunks of information like this, is invaluable especially with the reduced attention span of today's students."

The Results: Practical Skills in an Online World

"LabSim has really brought the necessary hands-on portion to our online school," Whitlock said. "It gives us this virtual world where we can simulate configuring software or the building of a router. It just wouldn't be possible to run an online class properly without it."

The hands-on, practical experience LabSim provides is essential to truly learning the concepts and ultimately, finding work in the real world. Just ask Karen Hargrove, a student in Virginia College Online's MIS program, who has found that her online courses using LabSim have been a "huge benefit."

"Without LabSim, I do not think that I would have understood the material half as well as I do now," Hargrove said. "Working through the online labs in my Cisco class, for example, was so helpful, letting me actually put into practice the concepts I was learning with the other LabSim materials. Although I have not graduated yet I will in the near future and I am positive that these simulations will give me more practical experience in the workplace."