ELEVATE PRODUCTIVITY AND IMPROVE OUTCOMES WITH INNOVATIVE LEARNING SPACES

WHITE PAPER

TetherView

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Virtualizing and redesigning labs and classrooms for better engagement and reduced IT costs

Schools worldwide, from primary to university levels, are discovering that computer labs filled with rows of desktops aren't meeting the needs of today's students.

Requiring learners to congregate in specific areas at specific times not only feels unnatural to them – remember that the average student today owns 2-3 mobile devices and routinely moves between them – but it also hampers learning outcomes.

Fortunately, this is a great opportunity for IT and facilities teams to unite around a common goal. By supporting new curricular models and student needs, IT has the power to cut costs, fortify data security, create new efficiencies across entire institutions, and even reimagine the role IT plays in learning and the student experience.

Put another way, embracing the new IT paradigm in education serves everyone involved.

This white paper describes how and why it's done. One of the key parts of the process involves repurposing the physical spaces that currently house vastly expensive, outdated technology, turning them into flexible, collaborative learning spaces. With the right focus and the right partners, learning spaces and IT can now complement one another and create unprecedented outcomes for students.

THE PROMISE OF NEW LEARNING MODELS

Educators are continually developing better ways to teach, often with students' evolving habits in mind. In addition to making technology a permanent part of instruction, school leaders are realizing that collaboration can be a more potent approach than isolated studying. And some of the best learning takes place unscripted and outside the classroom.

Unfortunately, there is often a mismatch between what educators know will serve students best – new practices and pedagogical models – and what they're able to provide based on IT constraints.

A great example is the flipped classroom. Under this promising new model, the typical content-delivery and work times are reversed. Students download multimedia course content at home; then, they return to class the next day to work through follow-up exercises and projects with their peers. With this arrangement, they're allowed to digest the course content at a time and in a setting that works for them – on the go, in their rooms, etc. – and work on assignments alongside their classmates and ask clarifying questions immediately rather than ending their day stymied and restless.

Flipped classrooms require more than a video channel and a browser, however. They require anywhere access to specific education and productivity apps so students can collaborate and engage with the same tools available on school machines. Naturally, the IT administrators who provision these tools to students need to ensure the integrity of the data and the system as a whole.

The flipped classroom gives us the problem in a nutshell: anywhere access is no longer a perk. It's pivotal to empowering students to learn, and it also impacts how we utilize the spaces they occupy while they're at school.

RECONSIDERING BRICK-AND-MORTAR

Not long ago, the Georgia Tech College of Engineering, the nation's largest engineering school, had a data problem.

On one hand, its students required increasingly powerful software that was expensive to update and license on hundreds of campus machines; on the other, the old single-lab campus model was creating bottlenecks and unnecessary delays during high-use times.

ENTER VIRTUALIZED DESKTOPS

The school adopted VDI. The question they faced, says Didier Contis, Director of IT Services at the college, was "How do we enable our students to use their personal devices and have access to the tools they need as part of their instruction?" That had to be the solution, since the students demanded mobility and access, and the old brick-and-mortar computer lab model was becoming unsustainable.

Deploying VDI allowed Contis and his team to offer applications in the same desktop environment students were accustomed to, but without requiring local installs on students'

devices. They leveraged the computing power of College of Engineering equipment in a new distributed model – one without any lines at the door.

Importantly, the setup was able to provision the applications with no degradation in system performance – often, streaming apps from a central server actually increases performance – and software updates went from a scale of hundreds of individual machines to a single IT-administrated endpoint.

The Georgia Tech case was a victory for IT and a great example of how technology and physical space are intertwined. Today, those labs can be put to better use. Many other schools are taking a hard look at their physical spaces and reconsidering how they facilitate all sorts of functions, from testing to group work and unscripted learning opportunities.

LOCATION, LOCATION, LOCATION

In 2012, the University of Central Florida (UCF) refreshed its IT, providing anywhere access and BYOD support to its 50,000 students. And along the way, leaders discovered how technology updates can drive changes to physical spaces.

The university transformed what had been a 200-seat computer lab into an innovative new learning space. They created a versatile new hub that facilitated peer connections and made collaboration on group projects easier, while still accommodating students who wanted to work solo on their own devices. All of this was rooted in new understandings about good design.

In higher education, these flexible learning spaces, which produce valuable informal connections and unscripted academic opportunities, are becoming increasingly important as learning tools – and as selling points for prospective college families. Put a prospective family in a space with excellent wifi, plenty of outlets, flexible seating to facilitate great on-the-fly collaborations, and movable writing boards, and they'll feel like the school has students' needs at top of mind.

At UCF, IT Director Craig Froehlich says the school's implementation was fundamental to this transformation because it created the possibility of repurposing the lab space and strengthened the university's educational value proposition. "It really ended up being the perfect complement... because students could have the software they needed right on their own device," he says.

Notably, this took place in the resource-scarce era following the worldwide economic downturn.

Far from being an "extra" cost, IT modernization in education is more appropriately perceived as a way to create efficiencies of many kinds. Several schools are already measuring costs savings measured in the millions.

And then there's the issue of available real estate. Schools can't just expand and build new buildings at whim; many whose campus footprints were developed during the latter half of the 20th century have bumped up against hard limitations on growth space.

Subsequently, they have had to look inward and repurpose the space they already have. At UCF, the removal of 200 machines from an old lab created an enormous opportunity without the need for onerous construction or cost.

THE ANATOMY OF EDUCATION SOLUTIONS

Solutions for education can empower mobility, improve education outcomes, and facilitate next-generation learning — as well as allow exciting updates to learning spaces. Educators and schools are able to reach students wherever they are, on whatever device they use, in order to improve performance, satisfaction, and graduation rates.

NOTABLE FEATURES AND APPLICATIONS

App and desktop virtualization

Educational institutions can centralize the management and delivery of Microsoft Windows apps, as well as student and staff desktops, with a high-definition, seamless experience across locations, devices, and networks. Allow IT to virtualize applications and desktops to ensure optimal convenience and productivity wherever students, teachers, researchers, and administrators work, even if it's off-campus. Apps and associated data remain in the data center, helping support compliance, data protection, and student privacy while also offering 24/7 access.

Education mobility management

Students and staff can securely access mobile, web, SaaS, and Windows apps and data on any mobile device through an app store with a single sign-on. Educators, parents, and IT can ensure that mobile devices in the classroom are being used appropriately. New students, visiting professors, and substitute teachers can be provisioned and deprovisioned in just minutes.

94% of higher education leaders agree that students today should be able to remotely access all the information, data, and software they need, on any device, at any time, and with a consistent user experience.

Ensure application availability

IT can ensure the availability of all applications via active health monitoring and server load balancing. Students, faculty and staff will be able to securely access their applications from any device, while IT can be assured that there are no threats to internal network resources from unauthorized access. IT can consequently manage compliance, information governance and data protection.

Collaboration and sharing

Files – even large images and videos, presentations, and other memory-intensive items – can be shared easily and securely among students, educators, and researchers wherever they may be. Secure storage and sync for files across all devices provides a convenient, efficient, and user-friendly experience.

DESIGN SAVVY

Here are some tips for repurposing old spaces to create mobile-ready, collaborative environments that serve students best.

Plug and Play

Ensure that wall outlets are plentiful and accessible, and that any required peripheral cables (to projectors, printers, etc.) are available.

Lost and Found

The loss of personal devices isn't a problem technologically – users can simply switch to any substitute device and log in from there – but with so many devices being used at any one time, it can be wise to create a check-in or registration system for personal hardware.

Diverse Learners

Although collaboration and socialized learning is prevalent, remember the student who would prefer solitude. Create nooks or privacy areas to accommodate different habits and needs.

ABOUT TETHERVIEW

TetherView provides infrastructure enabling Desktops as a Service (DaaS) – full-featured desktop experience delivered from a private cloud to any device, including a workstation, tablet or smartphone. TetherView's DaaS platform provides all of the benefits of virtualized desktops without any of the hassles. TetherView enables IT businesses to rapidly deploy and manage desktops to users connected on any device, anywhere, without the upfront costs and complexity of traditional desktop virtualization transforming desktops from a CAPEX to OPEX item.

For more information, visit www.TetherView.com.