Accelerating business transformation with desktop virtualization

Education Sector Advisory

Supporting digital learning and teaching excellence

If you work in education, particularly higher education, you're probably focused on a range of projects connected with improving learning outcomes for students, developing sustainable and cost-effective funding models for the institution, and modernizing teaching practices and business operations. Such projects may form part of a modern digital campus initiative, with investments in both physical and digital infrastructure primarily geared to student learning experiences. However, this expenditure must also support the changing nature of academic activity within the sector. Desktop virtualization will form part of your IT stack today, but it's worth considering how recent advancements in virtual desktop infrastructure could help you accelerate growth, balance priorities, and adapt to change.

Attracting students and managing costs through productivity, insight and adaptability

The modern student has modern expectations, and meeting these is likely to be the primary goal of your institution, especially if you participate in the increasingly competitive university education sector. This starts with student outreach and engagement programs, before leading onto the enrollment process itself. University marketing, once confined to the two or three months before applications, is now almost constant. However, changes in funding and admissions policies are affecting student recruitment, with significant fluctuation in numbers and the fees that go with it.

Managing business expansion and growth requires access to planning, analysis, and forecasting solutions. Cloud-based offerings are increasing in appeal here, but on-premise applications are still common. Managers, department heads, and administrators use a variety of tools and applications to get work done, so the desktop computing environment must be kept up-to-scratch. This includes keeping desktop apps and operating systems up-to-date and ensuring that sensitive data is kept private and secure. No one wants draconian policies or complication when it comes to using IT, but someone's got to carry the burden associated with governance, risk, and compliance, and this may well fall to you.

Teaching professionals account for around half of all employees in the education sector, and their use of desktop computers, applications, and tools is a fundamental aspect of modern education. But having ready access to robust and reliable digital teaching resources is only half the story. Educators are also expected to capture and record student progress, plan lessons, write reports, and develop curricula. You'll be aware of the support burden this places on IT personnel, and the impact on students and staff when issues arise, so all efforts to make the Windows desktop less brittle are worthwhile.

It's unusual for students not to have their own computer these days, even in the early years. However, schools, colleges, and universities are still expected to provide resources, especially where specialized applications, peripherals, and computing capabilities are concerned. Virtual Reality, High Performance Computing, and Artificial Intelligence are just some of the technologies entering the classroom, access to which requires an affordable, adaptable, scalable, manageable end-user computing strategy.

Virtualizing Windows desktops and applications to help educators adapt and scale

The design goal of a modern computing environment is to provide users with an easy-to-use, secure, and cost-effective desktop experience that can deliver the personalized applications and data they need, on any device they are likely to use, from any location they happen to be. You're no doubt familiar with traditional desktop virtualization products, but consider how these examples of modern desktop virtualization technology might assist you as you think about some of your organization's challenges:

◆ **Visual learning:** Using new graphics virtualization technologies, specialized processors can be dedicated to virtual Windows desktops, enabling pupils, teachers, students, and researchers to run workstation-grade visualization and computational applications on-demand, on any device.

◆ **Access systems from anywhere:** Multifactor authentication, resource authorization policies, and connection authorization policies control employee access to resources and sensitive information located within your business environment, enhancing security, compliance, and mobility.

◆ **Pre-configured, pre-integrated, pre-tested:** Vendors and system integrators are taking the pain away from deploying the servers, storage, network connectivity, and software required for on-premise desktop virtualization deployments. And when cloud services make sense, modern remote desktop infrastructure is available here too, including Desktop-as-a-Service (DaaS).

Server session-based desktops continue to offer the most cost-effective route to a Windows PC, but with Windows Server 2016, Remote Desktop Services can also be configured to provide personal and pooled virtual desktops, or a combination of the two models. Within these virtualization environments, IT admins can grant students and employees access to a modern fully-managed desktop experience, complete with applications and productivity tools. Alternatively, users can access specific applications that are hosted/run on a virtualized system but appear as if they're running on their desktop like local applications. By combining these approaches, educators can develop more adaptive, more creative working environments, optimized for specific students, employees, roles, and activities.

Modern desktop virtualization solutions offer new benefits to the education sector

Educational establishments haven't traditionally been a target of criminals or cyberterrorists, but malware, ransomware, and botnet attacks are on the increase, often spreading across endpoints, like infected homework emailed to professors, or compromised files uploaded to class webpages or portals. Desktop virtualization might not be your primary means of protecting and securing the organization, but lessons can be learned from other sectors that use it precisely for these reasons.

Administrators and clerical staff play an important role in your institution's expanding list of business processes. So, as you introduce new student engagement models and ways of working, the need for an adaptive digital working environment becomes essential. This is where modern virtual desktop infrastructure and application virtualization technologies can undoubtedly help. With future developments and projects in mind, how might the matrix below look for your own organization?

Modern Desktop Virtualization Benefits and Opportunities	Productivity and Business Continuity	Governance, Risk and Compliance	IT Efficiency & Efficacy	Digital Transformation Opportunity
Principal, Dean, Provost, Head Teacher, Finance Manager, HR Director, Bursar	✓	✓	✓	✓
Data Protection Officer, Contracts Officer, Finance Administrator	✓	✓	✓	✓
Grants Officer, Asset Management Surveyor, Communications Coordinator	✓	✓	✓	✓
Faculty Director, Professor, Lecturer, Reader, Teacher	✓	✓	✓	✓
Finance Assistant, Student Results Assistant, Student Engagement Assistant	✓	✓	✓	✓
Pupils, Students, Researchers	✓	✓	✓	✓

The bigger the tick, the more positive the impact

Implementation considerations

Digital transformation initiatives can be accelerated when business and IT leaders co-create solutions with experts in the field. System integrators and technology providers have already developed a range of offerings that span every aspect of desktop delivery strategy, from initial assessment right the way through to Desktop-as-a-Service (DaaS). However, there's plenty of scope for the education sector to add its own layer of business value. And finally, we don't want you to think that desktop virtualization is a panacea, but delivering a modern digital workspace without it is likely to be a lot harder.

Further Reading

The full paper 'Desktop virtualization as an accelerator of digital transformation: Fast-track creation of a modern digital workspace' can be downloaded from the Freeform Dynamics website here.

About Freeform Dynamics

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Fujitsu provides desktop virtualization solutions based on best-in-class virtualization technologies, proven infrastructure products, and end-to-end lifecycle services from a single source. Customers benefit from rapid implementation and reduced risk resulting from Fujitsu's extensive project experience. Especially for VDI, several integrated Fujitsu systems give customers the choice of making a fast and easy move to virtual workspaces according to specific business needs, including applications and digital workspaces delivered as a service from the Fujitsu Cloud.

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