Issue Brief

Cloud–Based Communications in Education
How VoIP Helps K–20 Institutions Succeed

Modern Communications are Critical in K-20 Education

The timing has never been better for K-20 institutions to turn their attention to their communications infrastructure. And for K-12 schools in particular, new changes in government E-rate funding for Voice over Internet Protocol (VoIP) offer an unprecedented opportunity. This issue brief discusses the common challenges education institutions face — and explains how cloud-based unified communications address them.

For education institutions, modern digital communications are key. They provide mobile learning, collaboration, videoconferencing, efficient messaging, rapid emergency response and much more. Indeed, cloud-based communications, such as VoIP, have a bigger role to play in education than ever before, especially as legacy phone systems age and require either costly repairs or replacement. Using upgraded, enhanced digital cloud communications helps budget-crunched schools, colleges and universities meet growing student and educator needs in a cost-effective way. Plus, the digital nature of VoIP means that it enhances and works well with a variety of other technologies that schools are already using to provide better communications and online environments and improve student outcomes.

Communication Needs in K-20 Institutions

Students shopping for colleges use Web chats to speak with admissions representatives, and often complete courses online. High school students take virtual field trips via videoconference. Elementary school administrators send automated emails to parents warning of school safety issues. Busy instructors receive voicemail messages from administrators in their email inboxes — automatically translated into text and easy to scan during classroom breaks.

These are just some examples of the types of digital communications students, parents, instructors and education leaders expect. To meet these needs, communication systems have to be agile and integrated, blending different elements together in a unified way, which is why many institutions are turning to unified communications (UC).

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Types of Communications Technology

VoIP — which provides communications over an Internet connection — is a key feature of UC. Cloud-based UC systems make use of the Internet for communications, storage and administration. In hosted cloud-based UC systems, a service provider handles the administration, service and maintenance of the infrastructure — freeing up school staff that would typically manage them.

The use of UC is increasing in education at all levels. According to a recent Center for Digital Education (CDE) survey, 29 percent of higher education institutions and 26 percent of K-12 schools have already implemented UC. Another 15 percent of higher education institutions and 13 percent of K-12 schools plan to upgrade to UC within the next 12 months.[1]

Educause recently further validated UC's importance when it listed "unified communications and collaboration" in its top 10 strategic technologies college and universities need to pay attention to in 2015.[2]

Why is UC growing among education institutions? To a large extent, hosted UC can answer many of the challenges and enable many of the growing trends in K-20 education today.

Overcoming Common Challenges with Cloud-based Communications

Using cloud-based UC services can help K-20 institutions struggling with a number of different problems, ranging from budgetary (providing cost savings) to pedagogical (fostering collaboration and personalized learning). Here's a review of some of the types of challenges that UC in the cloud can address.

Dwindling dollars. It's a perennial problem for most education institutions: how to make often shrinking resources stretch to cover ever-increasing costs.

Education institutions that rely on the aging hardware of PBX systems face high maintenance and repair costs, not to mention time lost by staff due to phone glitches. Putting in new, premises-based systems can require expensive investments in hardware, software, training and provisioning, which can take staff away from tasks more directly related to improving student outcomes.

Hosted VoIP systems, on the other hand, have dramatically lower upfront capital expenses, as well as decreased maintenance and support costs, leading to a reduced total cost of ownership. Typically, administration can be handled via easy-to-use Web portals, while tech support is taken care of by the cloud host, rather than institution IT staffers.

Frost & Sullivan found hosted UC can save money when organizations merge voice and data access lines (up to $1,200 per T1 line). When basic call control and voice features are moved to the cloud, institutions can expect additional savings of $300 to $500 per line.[3]

Twenty-nine percent of higher education institutions and 26 percent of K-12 schools have already implemented UC. Another 15 percent of higher education institutions and 13 percent of K-12 schools plan to upgrade to UC within the next 12 months.

Emergency preparedness. Hosted cloud-based UC can provide advantages over on-premises services in the case of emergencies, such as floods, tornadoes or other natural disasters, by ensuring resiliency and redundancy. Because it is cloud based, hosted UC protects data and — if the provider offers redundancy and disaster resilience — keeps the service up and running. Many hosted services allow calls to be easily re-routed to other locations, or offer mobile apps with all the same features available in the office or classroom to keep communications going.
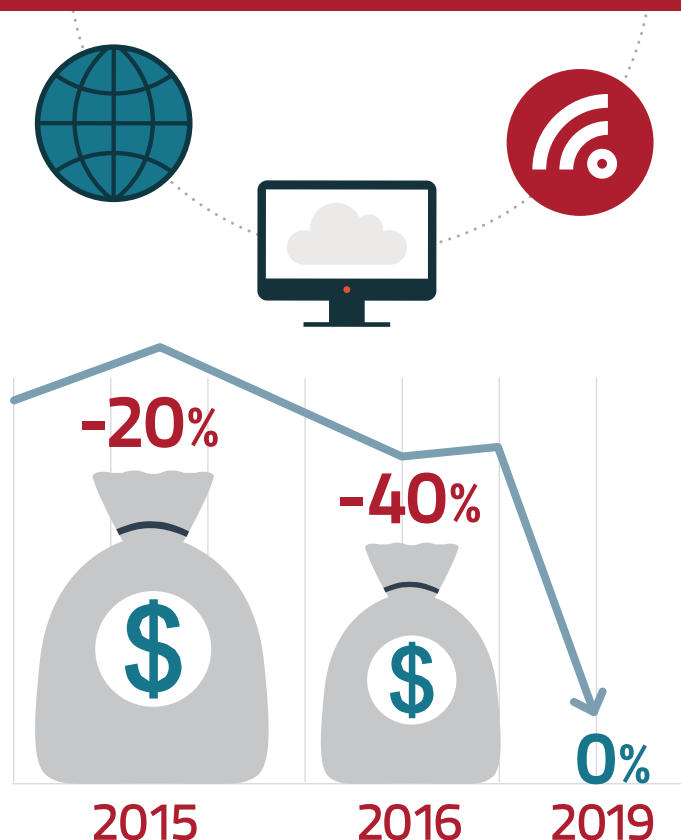
K-12 Alert: E-rate Phasing Out for VoIP

For the past decade or so, K-12 schools have been able to receive significant subsidies (20 to 90 percent of costs) for VoIP products from the federal E-rate program, which reimburses schools for telecommunications products and services. However, E-rate shifted its spending priorities as part of a modernization effort in 2014 and now emphasizes broadband instead of voice services.

Starting with the 2015 awards, VoIP reimbursements will be reduced by 20 percent; by 2016, the cuts will be 40 percent; and so on, until total phase-out occurs in fiscal year 2019. This will vary by school, depending on the level of subsidy a district can claim. Discounts are based on the poverty level within the district; those districts at the highest end qualify for 90 percent subsidies while those on the lowest end only qualify for 20 percent, meaning they are cut off from VoIP reimbursement immediately. (A chart listing percentages and reduction amounts is available on the E-rate site.)[4]

Schools that are eligible for E-rate and have been considering VoIP may want to apply as soon as possible to take advantage of the highest reimbursement level for which they qualify.

Even with the VoIP phase-out, however, E-rate can still be an indirect source of funding for schools, in the sense that it will help schools implement the fast Internet services that support UC.

-20%

-40%

0%

2015   2016   2019

Student engagement. Most K-20 institutions today seek to improve collaboration skills among students and provide more personalized learning to boost student engagement. UC can make these educational goals easier to attain.

Students can work together — no matter where they are physically — by using videoconferencing, phone conferences, texting or emailing. Or they can share information via the online desktop collaborative spaces that some UC services provide.

Instructors can use these same methods of communication to help personalize learning by sending students differentiated assignments and resources, or interacting via text, email or personal video to answer students' questions.

At Learn4Life, teachers, students and their families frequently use videoconferencing to connect. "Being able to see the person you are talking to instead of just hearing a voice makes communication more effective."

— Learn4Life Senior Vice President Skip Hansen

Meeting technology expectations. Students, parents and instructors expect education institutions to offer technology services and a certain level of technological innovation. At the higher education level — and even sometimes in K-12, where private and charter schools compete with public entities — modern technological capabilities are a competitive advantage.

Cloud-based UC offers the following features these stakeholders expect:

- **Mobile access**, allowing them to connect whenever and wherever they want

- **Device and Web browser neutrality**, so they can communicate using any operating system or device

- **Streamlined communications,** such as instant messaging, social media connectivity, and voicemail and faxes delivered to email, where they can be viewed as text

- **Distance learning** functionality, including real-time, high-definition videoconferencing; audio conferencing; streaming or stored lectures (annotated for ease of playback); and omni-channel capabilities that allow remote students to connect in multiple ways, sometimes simultaneously (such as watching a live lecture while texting with other students during a classroom chat)

- **Secure communications** that protect the privacy of students, with advanced authentication features and compliance with federal standards.
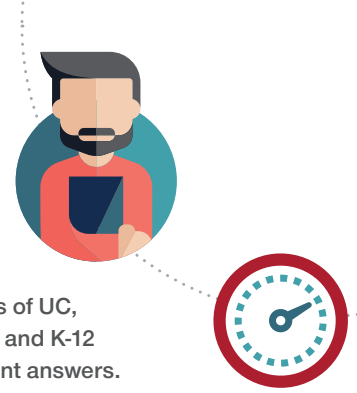
A Look at UC in K-12 and Higher Education

When asked about the chief benefits of UC, IT professionals in higher education and K-12 technology departments had different answers.

For higher education, UC's top advantages are:
1. Easy integration and support for distance learning
2. Increased productivity of staff and students
3. More reliable communications channels
4. More strategic use of university resources

For K-12, the advantages are:
1. Increased productivity of staff and students
2. Reduction and optimization of operating costs
3. More reliable communications channels[5]

The Cloud Comes to Life

Learn4Life is a California-based charter school network that serves disadvantaged, at-risk youth — teens who have dropped out of high school or are in danger of doing so. To meet these students' needs, Learn4Life offers a personalized, distance-learning alternative. Students take courses remotely but also spend one or two days per week at Internet-equipped Learn4Life resource centers, which are often located in churches, youth clubs or storefronts.

The resource centers are important because most Learn4Life students can't attend traditional school five days a week — either because they live too far away and lack safe and reliable transportation, or because the students have conflicting obligations such as jobs or their own children to care for, says Learn4Life Senior Vice President Skip Hansen.[6]

Cloud-based UC has been an ideal solution for the organization, notes Hansen. Here's why:

- Resource centers can be put in place quickly, with voice, data and video services scaled as needed. The school no longer has to wait weeks for equipment to arrive and be installed. "Our goal isn't just to reach kids; we're trying to save their lives," Hansen says. When reliable communication isn't available, new sites have to be delayed, which can hinder the organization's outreach to students.

- Meeting and collaboration features are used daily. Teachers, students and their families frequently use videoconferencing to connect. "Being able to see the

person you are talking to instead of just hearing a voice makes communication more effective," Hansen says.

- Group paging is another popular UC feature. Employees at the company's 70-plus locations can hear group pages on their desk phone intercoms. Or, if they use their UC service's mobile app, they can access these messages on their mobile devices.

- Teachers are able to work remotely, thanks to the mobile app, which connects them to their school line on their personal smartphones, tablets or other devices. This lets instructors work from home, while traveling or at other locations — an ability that Hansen says has improved employee productivity.

- Administration is easy via a Web interface. Staff can make immediate changes when needed, such as providing access to a new staffer. Tech problems are resolved quickly by the service provider.

- Cost savings are another plus. Learn4Life has received significant E-rate subsidies — 85 to 95 percent of its UC costs. While E-rate won't be able to provide this level of support in coming years, Learn4Life's total cost of ownership is still less, since it doesn't have to buy and maintain expensive hardware or staff a tech support team to handle potential issues.

A Foundation for Success

Education institutions at all levels can future-proof their communications with cloud-based services. VoIP, particularly when hosted in the cloud by a reliable provider, can enable institutions to keep pace with technology and innovation, while more easily scaling to meet their needs. In addition, by replacing aging systems with cloud-based digital communications, education institutions can save money on both capital and operating expenses and still

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offer increased functionality and features to students and instructors. This helps them achieve their ultimate goal: making learning more effective.

Endnotes

1. CDE Infrastructure of the Future Research Survey, 2015
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Underwritten by: 8x8, Inc.

8x8, Inc. (Nasdaq: EGHT) empowers business conversations for more than 33,000 small and medium-sized businesses with cloud communications services that include hosted PBX telephony, unified communications, call center software and video conferencing solutions. The company has been delivering business communications services since 2004 and has garnered a reputation for technical excellence and outstanding reliability. In 2012, 8x8 was named a market "leader" in Gartner's Magic Quadrant for Unified Communications as a Service (UCaaS) in North America and was recognized as the No. 1 Provider of Hosted IP Telephony by Frost & Sullivan and Synergy Research Group. **For additional information, visit www.8x8.com, or connect with 8x8 on Google+, Facebook, LinkedIn and Twitter.**