Transform the Learning Experience with a Comprehensive Collaboration Strategy

White Paper

Introduction

Just on the outskirts of an urban slum in New Delhi, India, a group of children come across an Internet-connected PC mysteriously lodged in the wall of a building. Prompted by their natural curiosity, the children play around with the device, quickly teaching themselves and their peers how to use a piece of technology they have never used or even seen before.

Known as the "Hole-in-the-Wall" experiment conducted in 1999, education scientist Sugata Mitra's research sparked a radical shift in how educators look at new teaching methods. He demonstrated the power of the multiplier effect, showing how in a collaborative learning environment, students are more likely to explore, learn, share their knowledge, and in turn, learn even more.

Many now believe that the future of learning will no longer be lecture-based, but instead based on the experience, the interactivity that takes place in the classroom. Technology is promoting this evolution. As outlined in The Future of Learning Institutions in a Digital Age, a report released by the John D. and Catherine T. MacArthur Foundation:

> "The connectivities and interactivities made possible by digitally enabled social networking in its best outcomes produce learning ensembles in which the members both support and sustain, elicit from and expand on each other's learning inputs, contributions, and products. Challenges are not simply individually faced frustrations, Promethean mountains to climb alone, but mutually shared, to be redefined, solved, resolved, or worked around–together."

With these new opportunities, however, also come unique 21st-century challenges. Budgets are being cut, resulting in a shortage of teachers and administrative resources. At the same time, schools and universities must prepare students to participate in a global economy, equipping them with the collaborative problem-solving skills and digital media literacy to thrive in the next-generation workplace. In short, many educational institutions are tasked with having to do more, in completely new ways, with less.

To address these challenges and foster a new type of social learning, schools and universities are increasingly turning to collaboration technologies–that is, to interactive, real-time, often video-based tools and software. In this document, you

will learn why it is critical to have a collaboration strategy for your school district or higher education institution, how important it is to take a holistic approach toward defining this strategy and the supporting technology infrastructure, and how your organization can successfully make the transition to a 21st-century learning environment.

Addressing Challenges and Creating Opportunities

From video and web conferencing, unified communications to social media, collaboration technologies are opening new doors for today's students, teachers, and administrators. As these technologies grow in capabilities and usage, a number of new opportunities are emerging that can help educational institutions solve the main challenges they face today.

- **Connected classroom:** Give students visibility into the outside world by taking them on a virtual field trip. Allow them to work with students from other school districts, cities, or countries through video. The current generation of learners has grown up with video sharing, social networking, and other Web 2.0 technologies, and engages best when these capabilities are used in the classroom.
- **Lecture capture:** Today's tech-savvy students want to consume media in any way they can—including schoolwork. Schools and universities can record online lectures and make them available for anytime, anywhere playback, saving classroom time for interaction and working together, while the lecture can be viewed later. This also allows teachers to focus their efforts on students who can benefit from extra attention.
- **Accelerated professional development:** Reduced budgets can make it difficult to provide faculty and staff with the training they need. Schools and universities can accelerate professional development and accreditation for teachers using video-enabled web events or on-demand video sessions. Train them on best practices in the classroom, and deliver consistent training across schools.
- **Distance learning:** Provide students with a quality education, regardless of location. Allow a college student in India to participate in a graduate-level course in San Francisco. Or if high school students do not have access to a certain course because it is not offered at their school, use web conferencing to bring them into that course remotely. Teacher shortages are being felt everywhere—with collaboration technologies, you can take full advantage of the instructors you have by making them more easily accessible. Credit recovery can be easier to accomplish as well, allowing students to make up missed classes to get the necessary credits for on-time graduations.
- **Collaborative services:** Whether due to budget cuts or lack of available resources, some schools may not be able to offer certain services (for example medical, clinical, and speech therapy services). Collaboration tools, such as telepresence and web conferencing, can allow experts to bring their services to distant schools and students remotely.
- **Teacher and administrator productivity:** Simplify communication between faculty, staff, and administrators. Create a more efficient, available support system with unified communications and instant messaging. Collaboration technologies can help improve operational productivity while reducing costs.
- **Collaborative community:** Develop an open dialogue with the district or community you serve. Let parents, students,

Customer Case Study: Duke University

Duke University has a longstanding commitment to applying information technology to enhance learning. As part of this initiative, the university implemented a full suite of Cisco® collaboration technologies—including Cisco TelePresence®, Cisco Quad™, and Cisco Show and Share®—to create more interactive dialogue in the classroom and prepare students for contributing to a global society. Not only does this comprehensive architecture empower students to collaborate with professors and peers anytime, anywhere, it also gives students experience working with real-world technology tools that they will use in the 21st-century workplace.

"Collaboration is at the core of good teaching, learning, and research. It is also how innovation occurs, which is the focus of a good educational institution and what's needed in the 21st century."

Greg Jones
Vice President and Vice Provost for Global Strategy and Programs, Duke University

and alumni know what is going on at your institution. Use web conferencing to deliver your message and spread the word faster and more cost-effectively.

As with all forms of change, moving to a collaborative educational and working environment is not without its challenges. Educational and IT departments each have their own unique set of concerns and objectives. To take advantage of the opportunities described, these two teams need to work together, not as separate entities. The critical first step toward making this happen is to create a transformational collaboration strategy.

Understanding the Changes that Need to Happen

Aligning IT and educational teams is a critical first step in developing an optimal collaborative environment. Each side has its own priorities and challenges, and both sets of issues need to be examined together to help ensure successful implementation and adoption of the technology.

From an educational standpoint, addressing a natural aversion to change is often one of the primary challenges in deploying collaboration technologies. For not only will all parties have to agree on the technology, they will also have to agree on the methodologies and ways in which it will be used. Even if one department or campus readily adopts these new tools, widespread adoption can still be difficult across an entire school district or university system. Of course, budget constraints can also prohibit adoption and the ability to scale new technologies. To truly realize the benefits of collaboration solutions, educational institutions will need to provide end-user training and support, which also costs money.

For IT, collaboration technologies present a different scope of challenges. For one, it can mean a significant redesign of the school or university's existing IT infrastructure. Educational institutions need a comprehensive data center that can handle the bandwidth and traffic requirements of video. This architecture plays a crucial role in supporting institutional collaboration, helping research universities gain a competitive advantage and build efficiencies through data center virtualization and consolidation.

With the rise in consumer devices—be they Apple iPads or iPhones, smartphones or tablets—IT teams will also need to provide seamless integration between various types of interfaces and technology. Finally, to encourage adoption and minimize end-user training, it will be important for IT to implement a collaboration platform that is intuitive and easy to use.

With these types of challenges from both educators and IT, it is critical that schools and universities address them with a holistic approach, considering the following.

- **Collaboration is much more than just technology.** Collaboration is a transformational experience that integrates people, processes, and technology. It is the catalyst for rethinking the learning and teaching experience, changing processes, and adapting culture. As a result, a holistic collaboration strategy and architecture must account for—and address—not only the technology, but also the effect those solutions will have on an educational institution's processes and culture.
- **Successful collaboration is not a "one-size-fits-all" solution.** Strategies and architectural solutions must be flexible enough to accommodate the unique communication and collaboration needs of both internal (faculty, staff, and administrators) and external (students, parents, and partner schools or universities) stakeholders. For example, an international university with a large number of overseas students will likely have a different collaboration profile than a local college with a smaller footprint. Schools and universities should consider the complexities within their specific student and teacher populations.
- **User adoption is the primary indicator of collaboration success.** Successful collaboration relies on the network effect: the fact that a product or service's value typically increases as more people use it. Before a collaboration tool can deliver value, it must have active participants. However, without clear alignment with educational imperatives and objectives, collaborative technologies risk becoming isolated silos of functionality. Moreover, if only individual faculty and staff members or departments adopt the deployed capabilities, anticipated benefits can fall short of educational expectations, and operational complexity and overhead may increase for IT organizations. New and effective, change management processes need to be established and implemented.

Developing a Collaboration Strategy

The best way to promote success in transitioning toward a 21st-century learning environment is to bring IT and educational decision makers together, developing a cohesive

collaboration strategy and vision. Schools and universities should orient the strategy toward a focus on education, allowing desired educational outcomes, not technology, to define collaboration initiatives. This can be accomplished by following a three-phased approach (Figure 1).

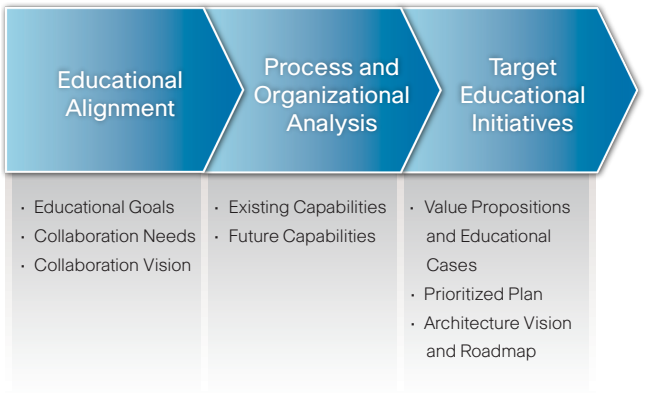

Figure 1. Approach for Developing a Collaboration Strategy

In the educational alignment phase, stakeholders across IT and educational departments focus on identifying the primary collaboration requirements based on educational and administrative needs. They can then establish a strategic collaboration vision, which serves as the reference for further collaborative technology analysis.

During the process and organizational analysis phase, thought leaders analyze the school's or university's existing collaboration environment to determine the extent of collaborative technology and functionality present (also called collaboration mapping). In this phase of strategic development, it is critical for stakeholders to understand which existing investments they must incorporate into the desired end state and determine where they can consolidate redundant capabilities (such as multiple wiki platforms). An assessment of user roles, cultural analysis, and existing governance helps determine gaps that might prevent the organization from achieving desired educational outcomes.

In the target educational initiatives phase, thought leaders develop and refine value propositions based on the analysis of supporting collaborative education cases. This process leads to a prioritized, strategic, and architectural roadmap that supports identified educational initiatives and outcomes.

Table 1 illustrates common activities associated with developing a collaboration strategy.

Phase	Activities
Educational alignment	· Conduct the collaboration discovery session with educational and IT stakeholders · Identify and prioritize areas of focus · Capture educational imperatives across in-scope organizations
Process and organizational analysis	· Inventory existing collaboration technologies and educational processes · Assess school or university's collaboration capability (internal and external), current state, and desired future state
Target educational initiatives	· Identify effect zones · Define strategic collaborative opportunities · Define tactical collaborative opportunities · Design prospective collaboration process and technology architecture · Create high-level prospective collaboration use cases · Estimate educational effect and cost

Table 1. Common Collaboration Strategy Activities

The result should lead to a collaborative architecture that is selective, consisting only of those capabilities that help meet identified educational and operational imperatives.

Turning to a Trusted Partner

For many educational institutions, planning, designing, and implementing a new collaborative strategy and environment is entering completely new territory. This shift toward next-generation learning will require stakeholders from across the organization to align and develop a cohesive collaboration vision that emphasizes capabilities, not products.

Customer Case Study: Paradise Valley Unified School District

The fourth largest school district in the state of Arizona, Paradise Valley Unified School District, uses Cisco TelePresence technology to improve operations, bring value to classroom learning experiences, and connect with the rest of the world. Using face-to-face video collaboration, the district has not only been able to provide instruction to students at multiple schools simultaneously from one highly qualified teacher, it has also connected with international institutions, including a sister school in Beijing, China, and the Technical University of Košice in Slovakia.

"[Cisco TelePresence] is helping us redefine the meaning of rigor, relevance, and relationships in the educational landscape for this new generation of learners."

Dr. Jim Lee
Superintendent, Paradise Valley Unified School District

To implement best practices that other schools and universities are using and provide optimal educational outcomes, turn to Cisco®, a trusted partner with experience and expertise in education. With a number of innovative programs focused on education, including the Next-Generation Professional Learning Community and GETideas.org, we are not only familiar with the particular challenges and initiatives of your school, district or university, we are committed to improving education on a global scale.

Cisco's holistic perspective on collaboration, combined with a deep understanding of underlying technologies, allows educational institutions to achieve the benefits of collaboration on the network architecture. With an education-centered, product-independent approach, Cisco Collaboration Services can help you define a collaboration strategy and architecture that addresses both your technology requirements and your educational goals.

Let Cisco help you create a foundation to expand on, in the time frame that best meets your resources and opportunity windows.

Conclusion

The world we live in is changing, bringing with it the need for change in the educational system. In the new global economy, employers are looking for graduates with 21st-century skills such as collaborative problem solving and digital media literacy. At the same time, because of the rise of social media, video, and mobile technologies, educators must adapt the current pedagogy to engage technologically adept students in a more digitally connected way. Many schools and universities realize this need for educational transformation, but are hindered by reduced budgets.

Fortunately, there is an answer: collaboration technology. Using solutions such as telepresence, unified communications, and web conferencing, schools and universities can improve efficiency, reduce costs, and enhance the learning experience. Making a successful transition to this new collaborative environment requires a comprehensive, well-thought-out architectural plan and deployment strategy.

To learn how Cisco Collaboration Services can help your organization develop a transformational collaboration strategy, click here.

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