

Unified Learning and Collaboration: Meeting the Needs of Education and Training in the 21st Century

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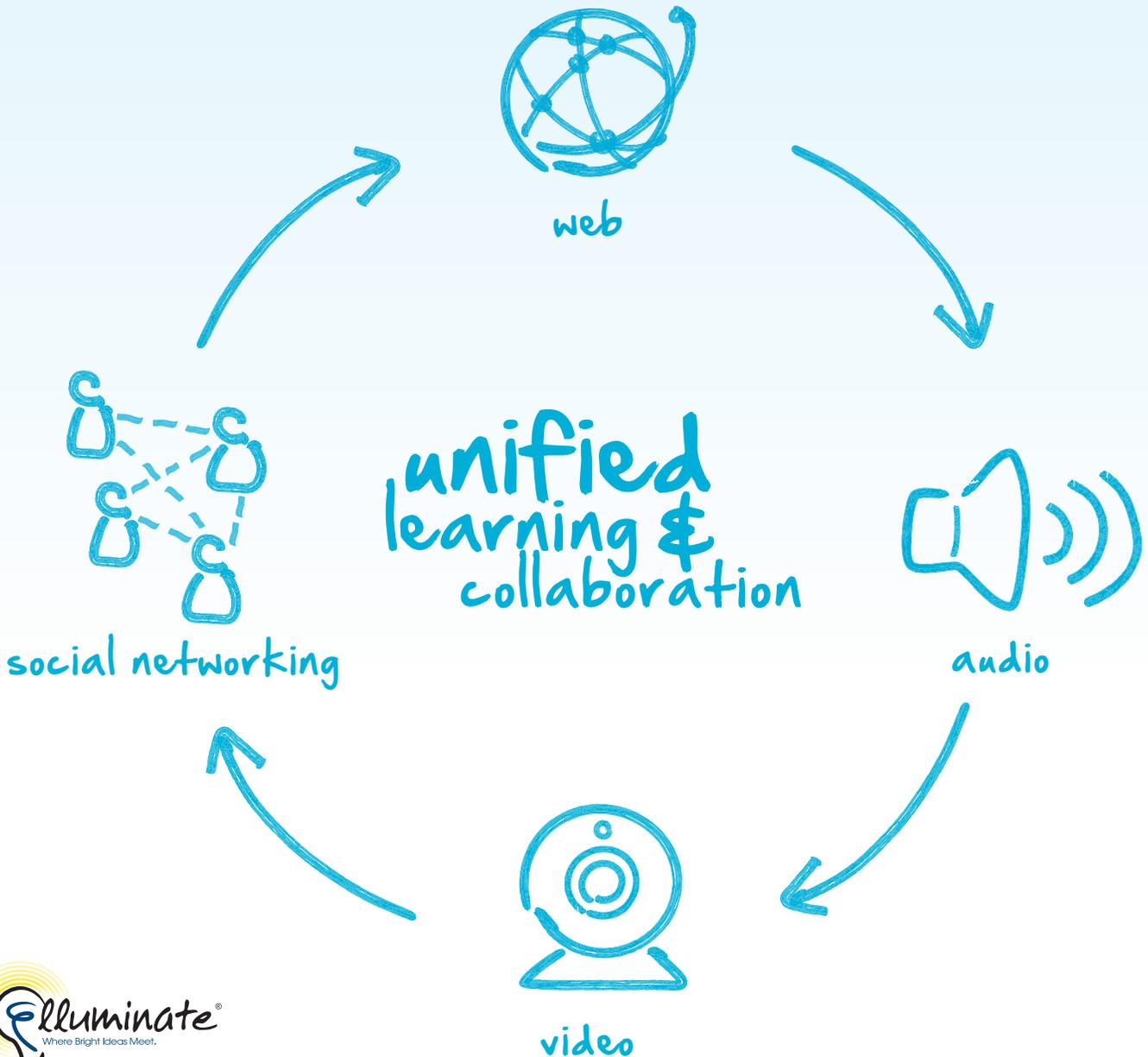


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“Today, teaching and learning must be less structured and more informal, self-enabled, interactive, and collaborative.”

The 21st century is an exciting time for education and training. Teaching, learning, and collaboration are evolving from traditional classroom lectures and activities to online courses, collaborative ad-hoc discussions, and easy access to information and experts. To best address the changing needs of today’s academic institutions and training organizations, something more is needed.

Today, teaching and learning must be less structured and more informal, self-enabled, interactive, and collaborative. At the same time, the business of education is becoming more crucial. Educators and IT organizations that support the enterprise technologies they use need to work more efficiently, make smarter long-lasting investments, and do more for less.

This paper introduces a unique approach called **unified learning and collaboration (or ULC)**, the delivery of a cohesive set of technology solutions to bring content, instruction, and community expertise to teachers, trainers, and learners, regardless of who or where they are, what or when they need to learn, or their individual learning styles. The true power of ULC lies in seamless integration—making access to these things easy, end-user adoption quick, and use intuitive. But first a bit of historical perspective.

The eVolution of eLearning

The traditional learning technology model starts with infrastructure, such as buildings and classrooms, growing organically and embedding technology into these locales. Networks, phone systems, and videoconferencing equipment enable basic communication, classroom learning, and room-based campus conferencing. Although this model allows basic knowledge transfer and provides direct exposure to subject matter experts, teaching and learning is too often formal, structured, and one way. The community of instructors, learners, and administrators remains mostly within school, campus, or corporate boundaries.

The introduction of learning and course management systems expanded classroom walls with remote learning, increased enrollments, and convenient self-paced courses, without a significant incremental investment in the base infrastructure. Still, learning content was mostly static and delivered separately to each learner. The human elements of real-time interaction and ongoing collaboration were missing.

Learning technology such as web conferencing adds **live real-time multipoint interaction between people** to learning programs and enables dynamic, multi-way participation—regardless of geographic location. Tools such as multipoint video, shared whiteboards, application and desktop sharing, web touring, breakout rooms, and polling add live, interactive instruction and collaborative sharing to static presentation of content. Plus, recording and publishing of interactions enable knowledge capture and review on a learner’s own time. What’s more, technology is also extending learning management systems to platforms for blended learning and shifting learning to mobile devices, offering even more modalities to suit individual learning styles.

While a blended solution of asynchronous and synchronous remains valid today, the scope of **what educators and learners need has broadened**. As instructors and trainers change with the times to teach 21st skills to digital-native learners, their practices must change to reach them. Learning must be less structured and more informal, self-enabled,



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interactive, and collaborative. The early success of new tools, like social networks, video, wikis, podcasts, IM, and more, show a demand for learner-driven education. At the same time, educators are resource constrained and must economically find and leverage relevant content and peer expertise to develop new practices with these 21st century tools—while maintaining high-quality teaching and learning.

Unified Communications

You may be familiar with the term **unified communications**, or UC. But if your core mission is education or training, UC is not nearly enough. We’d like to make a case for adding an ‘L’ and expanding the ‘C’ to make **unified learning and collaboration**, an approach that meets the challenges of education and training in the 21st century more comprehensively, better servicing educators, administrators, and technologists.

According to Wikipedia (http://en.wikipedia.org/wiki/Unified_communications), UC is the integration of real-time and non real-time communication services.

“**Unified communications** (UC) is the integration of real-time communication services such as instant messaging (chat), presence information, Telephony (including IP telephony), video conferencing, call control and speech recognition with non real-time communication services such as unified messaging (integrated voicemail, e-mail, SMS and fax). UC is not a single product, but a set of products that provides a consistent unified user interface and user experience across multiple devices and media types.”

However, in his article (<http://tinyurl.com/brent-kelly-article>), Brent Kelly explains that UC is a term that has not yet reached a consensus definition.

“...we simply point out that UC is certainly not a vendor division, product brand, or individual communications component.

The truth is that UC is in the eye of the beholder. For some companies, unifying voice messaging with email constitutes a UC solution. For others, automating emergency notification and response mechanisms is a unified communications solution. Still others want to unify their presence and IM engine with the calendar, PBX, directory, and other communications infrastructure via a common interface, and they call this a UC solution. There are companies that want to streamline a business process by adding some communications capabilities; for them, a communications-enabled business process is UC. Unifying communications is an idea or a concept and not a product.”

To address the current and long-term needs for academic institutions and training organizations, it’s critical to target the things that need to be “unified” beyond communications. While there are many solutions to communication challenges, they do not deliver a cohesive set of technology solutions to bring content, instruction, and community expertise to educators and learners—anytime, anywhere, and for any learning style.

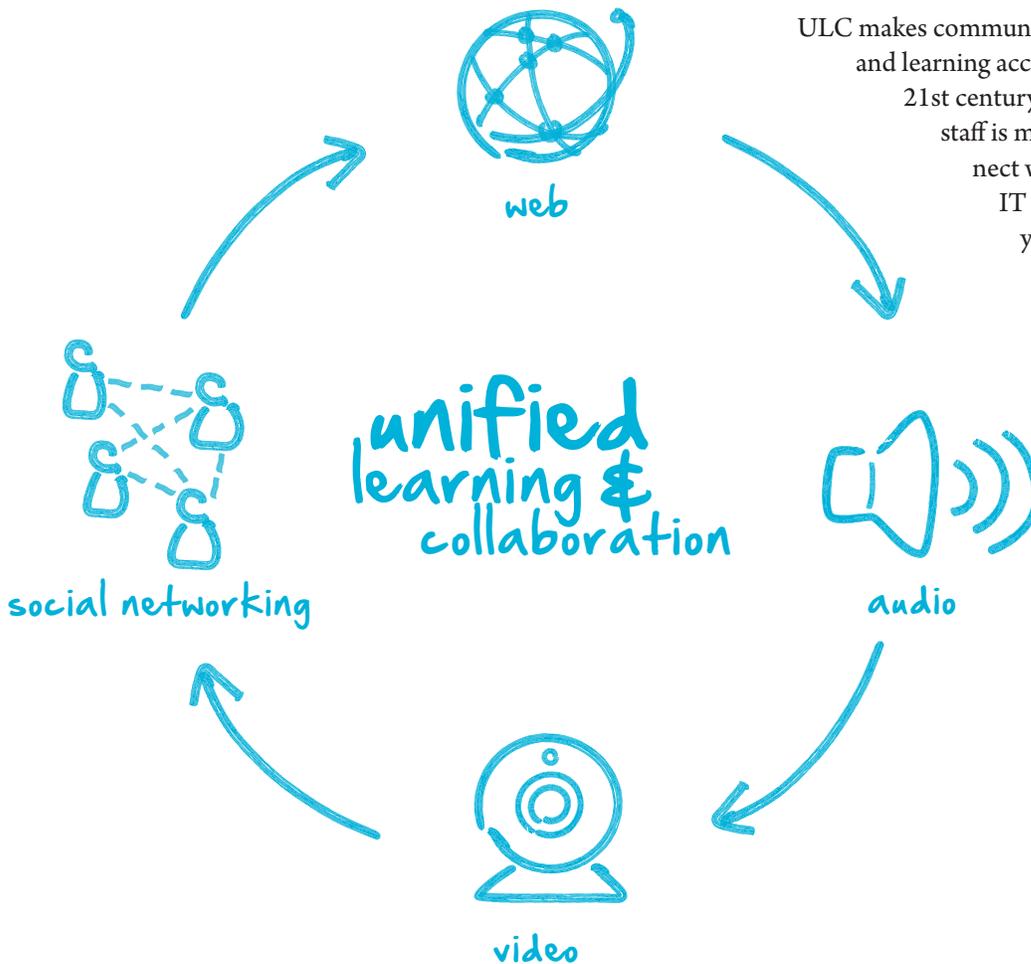


Unified Learning and Collaboration

By unifying your enterprise technologies—video and web conferencing, instant messaging, phone, learning and content management systems, social networks, and more—you can make learning and collaboration happen better, faster, and more efficiently. You can do this on a large scale across your enterprise while still retaining a personalized approach to each individual and learner. And you can realize superior learning outcomes as a result.

We call this unique approach **unified learning and collaboration (or ULC)**.

- **Unified.** Bringing resources like content, instructors, and community together to leverage technologies and bridge time, location, and cultures.
- **Learning.** Delivering personalized content based on an individual's needs and learning style.
- **Collaboration.** Getting the right people together at the right time to share knowledge, work together, and reach objectives.



ULC makes communication instant, collaboration continuous, and learning accessible, personal, and meaningful for today's 21st century learners. In addition, your administrative staff is more productive, your instructors can connect with colleagues wherever they are, and your IT staff can leverage and more easily manage your technology infrastructure.

Unlike UC, the goals of ULC are broader, implying that we must move beyond merely communication and data transfer to knowledge creation, where on-demand access to expertise, content, and communication creates a unified learning solution that is greater than the sum of its parts. With ULC, we can help people create knowledge, not just deliver data, facilitate contextual collaboration, and enable operational efficiencies.



Moving beyond ... ULC Technologies should have the goal of ...

Looking at IM, phone, and video as the only things to “unify”

Unifying place and activity and history of collaborations

- Understand that learning can take place anywhere—and is most effectively delivered in different physical places based on the context of activity and learner.
- Provide persistent virtual locations that have historical context of what happened before and a way to understand how knowledge was built.
- Provide locations for social interaction, or informal knowledge sharing, mixing in access to people that learners can find and connect with.

Closed list of expert resources and instructors

Unleashing expertise—access to instructors, experts, and peers

- Provide ways to find experts who can help create knowledge, collaborate, and/or instruct from a large pool of possibilities.
- Provide institutional control over how open or closed these lists of resources are.
- Engage wider communities of people who can both participate as learners and experts from unexpected places and in unexpected ways—within the context of an experience appropriate to the organization.

Content as something that is static

Treating content as something that is alive. It grows and changes as part of ongoing local and worldwide collaboration.

- Understand the context and provide access to existing content as a part of the current collaboration.
- Provide ways to review and ensure content remains accurate and up to date.
- Provide institutional controls over content based on ownership and level of openness desired.
- Enable content morphing into different forms, offering a choice of media to suit an individual’s preference and style.



ULC Use Case

According to a recent article in Campus Technology, when video, audio, and social networking infiltrated the web, New York Institute of Technology went in search of a new way to deliver online course content. Today, NYIT provides a 21st century learning experience that includes collaborative videoconferencing to bring resources to school systems nationwide and provide instructor professional development. There are virtual classrooms for remote online instruction and a central learning portal.

The school saves students time and money by eliminating travel to campus and reduces physical infrastructure costs. “The vice president of financial affairs and the provost are both smiling because of how well technology is helping us meet their goals,” says Stan Silverman, director of technology-based learning systems.

Bridget McCrea for Campus Technology, February 17, 2010

Read article at <http://tinyurl.com/NYIT-ULC>

Meeting Today’s Challenges for Teaching and Learning Organizations

What are the specific challenges that instructors, trainers, and their organizational ecosystems face? While some challenges are shared with business organizations, there are many that are unique and essential to those focused on education and training.

For Educators

- Making education more active, effective, and personalized by addressing individual learning styles and special needs
- Facilitating formal and informal learning and meeting the needs of mobile learners
- Finding instructors, subject matter experts, and asynchronous content that have relevance to the topic and audience
- Leveraging vast content repositories already in an organization’s existing LMS and facilitating real-time access and content iteration
- Building, delivering, and evolving high-quality programs and measuring their efficacy

For Administrators

- Ensuring that multiple instructors develop best practices, replicate consistent delivery, and ensure successful learner experiences over time
- Making education more accessible campus or community wide at an affordable cost
- Providing cost-effective professional development for faculty and staff to attract and retain qualified instructors and trainers
- Expanding reach to a wider range of learners with diverse locations and needs and leveraging limited teaching and training resources
- Creating a culture of collaboration across departments, campus, enterprise, or between organizations
- Having education contribute top line to the “business” with increased programs, enrollments, and revenue

For Technologists

- Facilitating adoption of business-critical learning technology and administrative applications system wide
- Connecting and unifying existing infrastructure and extend capabilities to meet the needs of the learning organization
- Reducing costs and leveraging existing technical infrastructures to realize rapid return on investment
- Implementing shared services that maximize use and benefits to many employees and instructors in the extended enterprise
- Providing the levels of performance, accessibility, availability, scalability, and security users demand to be effective and efficient

And the list goes on. How can ULC meet these challenges in a way that’s optimized for education and training? Let’s take a look.



“To ensure that learning happens in a better, faster, and more efficient way, we must unify enterprise technologies to provide easy access to resources that include content, instruction, and expertise.”

Unifying Content, Instruction, and Expertise

According to the recently released U.S. National Education Technology Plan (NETP) (<http://tinyurl.com/NETP-2010>), an essential component of what the report calls a **21st century model for learning powered by technology** is a comprehensive infrastructure for learning that provides every learner, educator, and level of our education system with the resources they need when and where they are needed. The report goes on to describe an infrastructure that includes people, processes, learning resources, policies, and sustainable models for continuous improvement in addition to connectivity, hardware, and applications.

Illuminate concurs. To ensure that learning happens in a better, faster, and more efficient way, we must unify enterprise technologies to provide easy access to resources that include content, instruction, and expertise. Embedded in and surrounding these three core blocks are a wide variety of components, including:

- Real-time (synchronous) sessions
- Non-real-time (asynchronous) sessions
- Video-focused sessions
- Data-collaboration-focused sessions
- Blended focus of location, technology, and learning styles
- Large-group interactions
- Small-group interactions
- One-to-one interactions
- Mobile learning and educational networking
- Planned and spontaneous interactions
- Multiple moderation modalities from tightly-controlled to open
- LMS and portal integrations at log-in as well as granular learner and instructor level
- Edges of platform open for third-party development

Content Umbrella

ULC addresses the concerns of teacher, learners, administrators, and technologists in support of the ability to:

- Import, reference, and access content from other systems, including professionally developed content from third parties as well as shared content available in educational networks
- Create or easily capture and adapt content to be used in real time and non-real-time sessions, including the professional development and services necessary to support best practices
- Find content that's relevant to the task or learning objective at hand or that helps fill a knowledge gap



ULC Unifies Enterprise Technologies

- Audio conferencing for basic communication
- Videoconferencing for room-based meetings
- Web conferencing for meeting and collaboration
- Virtual classrooms for live interaction and tools designed for education
- Instant messaging for ad-hoc, real-time communication
- LMS/CMS for remote, self-paced learning
- Social networks and learning communities for connecting and sharing on a global level

Instruction Umbrella

ULC addresses the concerns of teacher, learners, administrators, and technologists in these ways.

- Instructors have one or more identities and presence and capabilities associated with the identity currently taken. For example, in office for office hours, in session for regularly scheduled class, or grading papers with contact limited to peers and staff.
- Learners can become instructors and join peer groups to act as co-instructors for one another
- Instruction can happen in real time, in non-real time, and on a selection of devices in a selection of places, blending the physical and virtual worlds, if needed.
- Instructors can provide best practices and feedback to learning communities and vice-versa.

Expertise Umbrella

In this area, ULC addresses the concerns of teacher, learners, administrators, and technologists in these ways.

- Anyone can build and “publish” expertise that can be rated by peers, users, or even official accreditation bodies.
- Expertise can be shared in real or non-real-time.
- Expertise can be offered on content and instruction in the form of content objects, documents, course agendas and plans, web conferencing recordings, postings, and links to or actual embeds of arbitrary third-party data types
- Expertise can be acquired by finding people with relevant experience and interacting with them in real time or asynchronously for knowledge transfer

Supporting “Connected Teaching”

The NETP introduces the concept of “connected teaching,” where isolation is replaced with connection that includes 24/7 access to the information, tools, content, resources, systems, and expertise that empower educators to improve their own instructional practices and create engaging and relevant learning experiences for their learners.

The components to support connected teaching are available now. Unified learning and collaboration is about unifying enterprise technologies—infrastructure, applications, and social networking—in a way that’s optimized for education to improve learning and ensure efficient administrative operations. ULC is not just about communication. It’s about the context of that communication and making it instant and accessible, personal and meaningful, active and participative, and connected to relevant content and instructors, and expertise.



“With ever-decreasing budgets, academic institutions and training organizations must balance important educational impacts with bottom-line revenue implications, including a rapid return on their investment in technology.”

Facilitating the Business of Education

Education and training in the 21st century is all about keeping existing learners and attracting new ones with universal access, personalized and flexible learning, and a global reach. It's also about maintaining competitive advantage, reducing costs, and creating a culture of collaboration between departments, campuses, institutions, and organizations.

ULC is not just for the classroom. On an organizational level, this approach can help increase competitive advantage, support strategic planning and decision making, and enhance productivity for faculty and staff. The time has come to blend pedagogy with sound business decision-making. With ever-decreasing budgets, academic institutions and training organizations must balance important educational impacts with bottom-line revenue implications, including a rapid return on their investment in technology. A ULC approach can help of all sizes integrate online interaction into all their daily activities, enabling them to communicate, collaborate, and educate more effectively in the global community.

Conclusion

To summarize, a ULC approach enables academic and training organizations to realize exceptional outcomes that include:

- Enhanced learning experiences
- Increased learner comprehension, knowledge, and satisfaction
- Increased retention and completion rates
- Larger educational impact through opened classroom boundaries
- Increased adoption of learning technologies
- Enhanced teacher effectiveness
- Increased operational efficiency and productivity
- Leveraged technology infrastructure and rapid ROI
- Reduced travel and physical infrastructure costs

At Elluminate, we understand that 21st century education requires 21st century solutions. As the NETP explains, we don't have the luxury of time. The time to act is now. Welcome to the age of unified learning and collaboration.



About the Author

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About Elluminate

Elluminate, Inc. provides proven, best-in-class web, audio, video, and social networking solutions that support 21st century teaching, learning, and collaboration. The company serves more than 1 billion annual web-collaboration minutes to over seven million teachers and students located in 170 different countries.

Headquartered in Calgary, Alberta, Canada and Pleasanton, California, Elluminate is the trusted choice of prominent academic institutions and corporations, including ADP, Apple Computer, California State University, Florida Virtual School, Georgetown University, K12 Inc., London Knowledge Lab, Los Angeles Unified School District, Miami-Dade County Public Schools, Novell, Queen's University, Royal Veterinary College, Red Hat, IBM, and many more.

More Information

Learn how you can better leverage and integrate Elluminate and other major technology investments to realize the benefits of ULC.

- Visit www.illuminate.com.
- Contact Elluminate at info@illuminate.com or call 866.388.8674.
- For a free trial of Elluminate web conferencing, visit www.illuminate.com/trial/register.go?s=ULC
- Join LearnCentral, the social learning network for educators at www.learncentral.org

