



Collaboration in Higher Education: The Evolution of Learning

A New Era Technology White Paper

Executive Summary

Collaboration technology can change education as we know it. We have already seen how the internet has radically altered classroom learning by putting a wealth of knowledge at everyone's fingertips, teachers and students alike. With connectivity, we are opening up a new world of global learning: Classrooms include students from all over the world, and experts are brought in from afar to virtually enhance the overall learning experience. The immersive world of video is creating opportunities for students to not only explore new areas with ease, but also to collaborate with others in exciting and engaging ways.

In this white paper, we will explore collaboration in education, and how its evolution will revolutionize the way we learn. We will take a look at the challenges of collaboration in the higher education classroom and see how we can utilize the latest technology to overcome them. We'll talk about how higher education is a valuable testing ground for the latest collaboration technology. Further, we will discuss how the Christie Brio solution drives better collaboration for higher education and explore the many applications of the technology in today's learning environment.

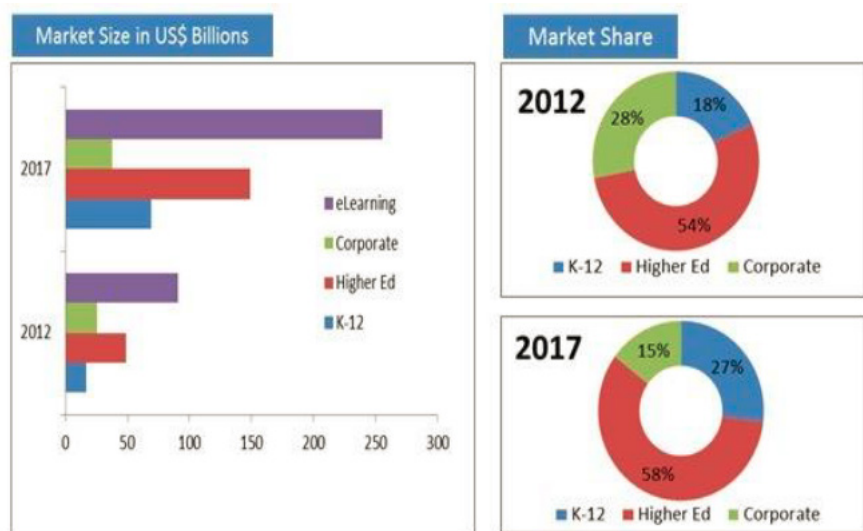
The Current State of Technology in Higher Education: An Overview

Once viewed as an add-on to traditional learning methods, technology is now a vital component in education. While the term “education technology” already exists—and has for several decades—the past few years have seen tech-driven transformations driving a tidal wave of change in higher education practices. Innovative approaches to teaching, like virtual classrooms, on-line education, and blended learning programs have opened doors to unlimited opportunities for students and educators alike.

Two of the major reasons for the tech boom in education is that today’s students are the first generation of digital natives, having grown up using technology since birth. They are also early adopters of the latest tech advancements, and demand access to the latest technology in all they do. We also see an ever-growing demand for tech-savvy professionals in the modern workplace. Entrenched in the “always-on” world of the Internet and social media through the use of smart phones and other mobile devices, modern-day students expect a more collaborative and interactive learning environment. According to the *ECAR Study of Undergraduate Students and Information Technology 2010*, a majority of college students agreed that the use of education technologies improved learning, however the tech tools used in their coursework did not ready them for the workplace. Fast forward five short years, and that situation has definitely changed.

Modern-day students expect a more collaborative and interactive learning environment.

Despite shrinking state and local budgets, according to a report from CB Insights education technology funding escalated to 55 percent in 2014, and it shows no signs of slowing down. A new study by Global Industry Analysts (GIA) estimates the global e-learning market will reach \$107 billion in 2015, driven by tech advancements and the need for additional skills to enhance professional competency. Predictions from Global Silicon Valley (GSV) show that by 2017, higher education will make up the largest portion of the global e-learning market share. (Figure below)





Which areas
of education
are benefiting
the most
from video
collaboration's
continued
adoption?

It is clear from these statistics that the education sector is primed for the next wave of digital transformation led by innovative new tech tools.

Video: An Essential Tool in Higher Education Enterprise

Despite being one of the earliest education technologies, videoconferencing continues to evolve and benefit the education sector in diverse ways. It is important to remember that today's videoconferencing is vastly different from that of the 90s. Modern students switch between multiple devices and use a wide range of media tools over the course of a single day. Therefore, to offer true benefits, video communication systems have to be easy, available on-the-fly, and ready to use with little to no training.

Some of the factors that make modern video conferencing so popular include:

A Variety of Low-cost Options

Video conferencing is no longer an expensive investment involving dedicated networks, resources, and a room full of equipment. Its integration with mobile technology enables students and educators to collaborate via video, from any location, with a simple tap or touch on their smart phones and tablets.

Network/System Agnostic

Today's videoconferencing tools do not require a standard operating system in order to function. They are able to perform on virtually any platform. This versatility makes set-up and use hassle-free.

Secure Operations

The availability of low-cost, enterprise-grade videoconferencing hardware and software ensures that all communication takes place within secure environments, protected by industry-standard security protocols.

HD Quality

Owing to 4G communications and other tech advancements, today's video conferencing systems offer HD video/audio quality free from call drops, freeze-frames, buffering issues, and fuzzy signals.

The State of Video survey by Kaltura reports that "video is becoming pervasive" across educational institutions today. Below are some findings from the study that outlines which areas of education are benefiting the most from video collaboration's continued adoption:

- Sixty-six percent of video usage in higher education is directed at remote learning/teaching.

Video creates an environment of collaboration and interactivity for students and faculty in higher education.

- Flipped classrooms—a model where students complete class work and assignments outside of the classroom, and spend class time on hands on projects, student led discussions, and exploration—contributes to 46 percent of video use.
- Seventy percent of schools use webcasting for a combination of teaching (47 percent), training (42 percent), and live-casting events (42 percent).

While competitively-priced mobile video conferencing is garnering a lot of attention, some of the best universities of the country are not shying away from making big investments in large-screen video collaboration programs. Recently, Missouri State University and The University of Missouri-Kansas City have teamed up for a \$2 million collaborative program. And Montana-based Carroll College is using funding of \$1.5 million to expand its opportunities for foreign collaborations.

Video Drives Collaboration in Higher Education

Here are five ways in which video creates an environment of collaboration and interactivity for students and faculty in higher education.

Better Engagement in Classrooms

Traditional learning methods often fail to interest today's digitally-driven students. Video-enabled teaching methods like the aforementioned “flipped learning” —where students learn outside the classroom via video/audio/text and participate in interactive sessions inside the classroom—are becoming a popular alternative to old-school teaching methods. Studies have found that this video-enabled method is more effective than traditional teaching methods.

Helpful and Cost-effective Overseas Study Programs

Video collaboration helps institutes design cost efficient overseas study programs. Not only does it eliminate the hefty price of travel, video-enabled global classrooms are also a low-cost way to bring students face-to-face with experts from abroad. While competitively-priced mobile video conferencing is garnering a lot of attention, some of the best universities of the country are not shying away from making big investments in large-screen video collaboration programs. Recently, Missouri State University and The University of Missouri-Kansas City have teamed up for a \$2 million collaborative program. And Montana-based Carroll College is using funding of \$1.5 million to expand its opportunities for foreign collaborations.

Easy Peer-to-Peer Connection

Videoconferencing allows students and research fellows to connect with their peers from anywhere. Collaboration on group assignments and presentations becomes seamless and simple, irrespective of the students' locations.



Christie Brio offers collaboration solutions for a wide range of academic environments.

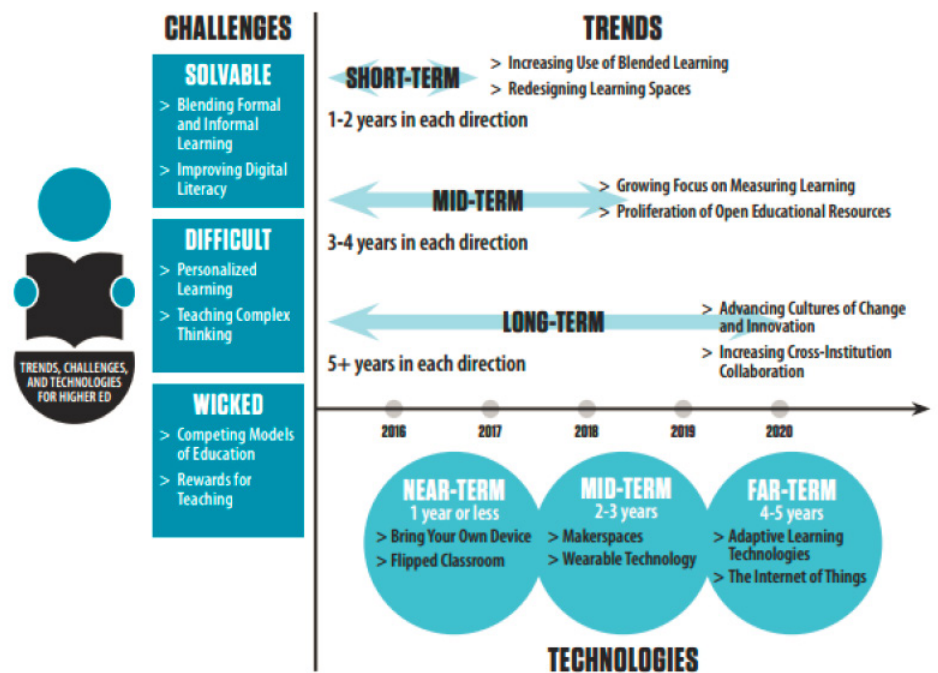
Archived Lectures for On-Demand Viewing and Sharing

The ability to record and store lectures and other special classroom sessions is helpful for students, allowing them to review the lecture whenever they would like. Overseas collaboration programs, where participants are likely located in different time zones, also benefit from this feature.

Easy and Secure Content-Sharing with Partner Universities

Video conferencing enables sharing between partner universities over a secure network. Sharing not only improves the outcomes of collaborative sessions, but also helps to build a stronger relationship between the partner institutes.

Roadblocks in Collaboration



Source: The NMC Horizon Report: 2015 Higher Education Edition

The NMC Horizon Report: 2015 Higher Education Edition has identified six key challenges in the path to using higher education technology for collaboration (Figure above). *Kaltura's State of Video in Education* report also reveals two problem areas—first, lagging digital literacy among instructors, and second, students' and educators' lack of confidence in creating their own video content. Besides these road blocks, the diversity of collaborative learning strategies—not to mention the ever-growing number of tech solutions on the market that can support these strategies—also makes it difficult for authorities to evaluate their direct impact on learners.

Other challenges include:

- Lack of technical standards when exchanging data and content.
- The need to have a personalized learning ecosystem in place to support educators.

- Having well-defined data policies, agreements, and research protocols developed.
- Privacy and security concerns due to the number of personal devices introduced by students on almost daily basis.

Christie Brio Solutions: Making Seamless Collaboration a Reality

Christie Brio offers collaboration solutions for a wide range of academic environments including classrooms, study groups, and research labs. Designed to address the challenges of video collaboration, Christie Brio helps take learning outside the walls of the traditional classroom. It brings together students, teachers, and remotely-located group members through up to five computers, smart phones, or tablets, by wirelessly streaming content onto displays, and channeling audio through a meeting room or classroom's sound system. It allows groups to share content, edit in real time, save their work, and capture action items for quicker decision-making—all this while not having to maintain expensive, complex, and elaborate systems.

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The Benefits of Christie Solutions for Higher Education

Affordability and choice.

With a broad range of brightness and resolution options, Christie technologies offer quality performance that is budget-friendly.

Crisp and clear visuals.

Often, bad video and audio quality interrupts collaboration. Christie eliminates this issue completely by providing an HD quality audio and video experience. Christie display solutions deliver the perfect balance of brightness, contrast, color accuracy, and image quality.

Robust security features.

Christie Brio allows institutions to set up a secure infrastructure so people can use the devices they prefer when collaborating—without risking the organization's security.

Easy to set-up and maintain.

Get your system up and running in no time, even without professional assistance. Easy to upgrade for the future. Christie can be easily integrated with a host of upgrades allowing it to scale alongside your institution's changing needs.

Superb quality and trustworthy performance.

Christie technologies are built to operate without interruption.

Low total cost of ownership.

Ease of operation, reduced maintenance needs, and energy-saving features make Christie a time and cost-efficient product for higher education institutions.

Zero trouble after the sale.

Christie's higher education AV solutions come with industry-leading warranties, service, and support.

How Christie Ensures Power-Packed Collaboration

Christie has an excellent range of projectors and integrated display systems, presentation and collaboration solutions, and pro-audio products for all kinds of budgets and application needs. Be it classroom, lecture hall, lab, training room, meeting space, or stadium, Christie Brio fits perfectly into every type of collaboration space.

Christie Brio offers the benefits of secure collaboration due to its multiple levels of security, as well as advanced features like secure wireless access points, wirelessly protected meetings, and robust encryption. This allows groups and individuals to communicate across diverse networks and devices without fear of a security breach.

With Christie Brio, it's easy to convert touch panels into shared white boards and annotation tools for a more interactive experience during all collaboration sessions. Participants from any location can add to or edit content, images, and video in real-time using various writing and drawing tools, as well as touch-enabled displays. White board drawings can also be saved and exchanged with participants across the network for later viewing or editing.

Conclusion

The benefits of using Christie Brio in higher education are myriad. Christie can be used as a full-featured tool for supporting video conferencing, as well as a collaboration tool in the classroom. It can be used to connect classrooms that are not co-located, or to replicate face-to-face interactions between students and teachers from abroad. Faculty and administration can also leverage Christie Brio's collaboration features to arrange ad-hoc meetings, without wasting time and money traveling. To top it all, it is easy enough to be used by anyone, anywhere, anytime.

Learn More

To find out what your institution can gain from this simple, secure, and seamless collaboration solution, contact New Era Tech at our toll-free number, 877-696-7720 or visit www.neweratech.com for a detailed analysis.

About New Era

New Era Technology helps customers work faster, smarter, and more securely in a rapidly changing digital world. More than 4,500 customers worldwide rely on collaboration, cloud, data networking, security, and managed service solutions from New Era to accelerate time to market, speed innovation, increase productivity, and create better learning experiences.

Headquartered in New York City, New Era has offices around the globe, including in the United States, the United Kingdom, Australia, and New Zealand.



About Christie

High quality, innovative, shared experiences for world-class organizations. Christie is a global visual, audio and collaboration solutions company offering diverse solutions for business, entertainment and industry. www.christiedigital.com



Resources

1. The NMC Horizon Report: 2015 Higher Education Edition
2. ECAR Study of Undergraduate Students and Information Technology, 2010
3. Video Collaboration in Education: Building a Foundation for the Digital Age by Polycom
4. Great Expectations: Students and Video in Higher Education, A SAGE White Paper