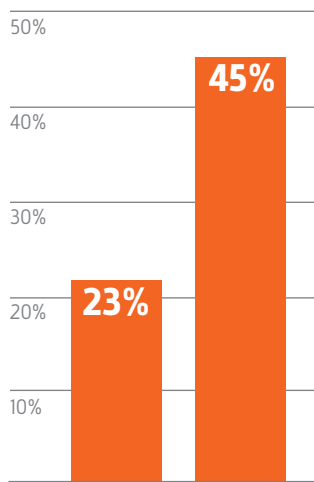


4 Ways Video Walls Help Higher Ed Attract Students, Create Collaborative Learning Environments, and Build Communities

The number of college students taking at least one online course nearly doubled over the last five years.



Source: 2013 College Explorer

INTRODUCTION

The higher education market has become increasingly competitive. Brick-and-mortar universities now find themselves competing for students not only with other traditional institutions, but a multitude of alternative learning options—online universities, online degrees from traditional campuses, and even MOOCs (Massive Online Open Courses).

At the same time, there is increased pressure for institutions to shift from the traditional lecture model to a more collaborative-based learning model that reflects the type of complex problem solving and group teamwork of today’s business environment. And as higher education costs continue to rise, institutions face pressure to persuade prospective students that their courses represent value for the money being spent.¹

One emerging technology trend, video walls, provides an innovative way to solve these challenges. Built from LCD display screens, video walls offer scalability, flexibility and the ability to customize based on budget and application. Quickly rising in popularity, video walls are being installed on higher education campuses across the globe for a myriad of applications.

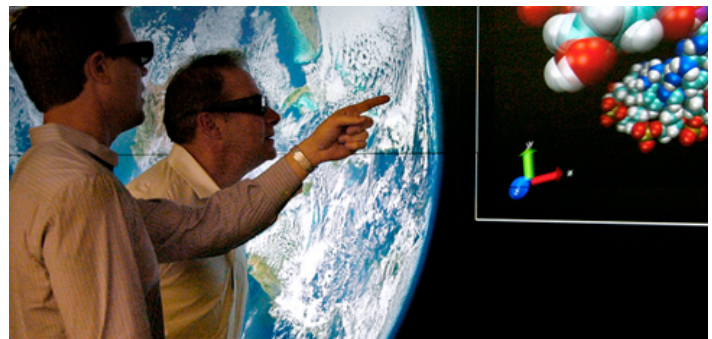
In this paper, learn about the types of video wall applications being implemented and how they are helping traditional institutions remain competitive and recruit more students.

1. VIDEO WALLS ADVANCE INTERACTIVE LEARNING AND RESEARCH

Traditional campuses excel in their ability to provide hands-on learning and research opportunities—the type of enriched learning environment that cannot be replicated online. And video walls are among the tools being used to create an interactive learning and research environment.

3D Visualization Opens New Avenues for Discovery

One groundbreaking use of video walls in higher education is in 3D data visualization. Partnering with AVI-SPL, a leading provider of audio video communication solutions, Rice University implemented a visualization wall at its Chevron Visualization Laboratory. The display wall, which also features an optical tracking system, creates a dynamic interactive experience. Users, through head movements and the system’s handheld user interface, become part of the data instead of simply viewing it.



This video wall enables Rice University researchers to maximize the value and relevance of their data by creating an immersive environment to explore and tag images from every possible angle.

Rice anticipates that the increased computational power of the visualization wall will not only help Rice's researchers make new discoveries, but will prepare students for careers across several disciplines in which data visualization is a valuable skill. Data imagery can be shared with as many as 25 students or professionals wearing specially designed 3D glasses.

"There is a lot of excitement about using the wall, finding ways to use visualization and developing workflows that will help advance our research objectives," says Jan Odegard, executive director of Rice's Ken Kennedy Institute for Information Technology. "Not only do we see interest across the schools of science and engineering but also in the schools of architecture, social science and humanities."²

Hands-on Opportunities Improve Learning

At another university, a 12-by-7-foot video display greets visitors to the main library. It is a central feature of a new "learning commons" wing. The university uses the video wall for research and as a hands-on learning opportunity for students to experiment with technology that will soon become standard in business environments. For example, a team of computer science students meet weekly to help build the software for the wall while researchers, attempting to map the neurons in the brains of mice, use the wall interactively—zooming in and out by simply moving their arms in front of the display. One student says he learns more through such projects than he does in the classroom.

By investing in video wall technology, institutions make more research and learning opportunities available, differentiate from online initiatives that cannot offer such opportunities, and attract faculty and students who are excited to participate in such a transformative learning environment.

2. VIDEO WALLS BUILD COMMUNITY AND ENHANCE THE CAMPUS EXPERIENCE

Brick-and-mortar institutions have another competitive edge over online learning initiatives: their ability to provide an engaging and socially connected experience. To enhance this experience, many higher education institutions have begun using video walls in public spaces to reach out to students and support their need for community, information and entertainment.

For example, one university recently incorporated a video wall into the two-story lobby of its newest residence hall. The video wall serves as a TV, movie screen and electronic billboard. Content shown includes live feeds of football games, television programming and information about other campus activities, events and news. Not only does it function as an advanced communication tool, it also allows students to play video games.

Taking Video Walls Outside for Social Engagement

A university in England uses a video wall to inspire campus life and its community. The university installed a large outdoor LED wall in its central piazza to show live streams of international sporting events, ceremonies, digital art installations and student films. The wall brings the campus community together—allowing students and visitors to view useful information or participate in community events.

3. VIDEO WALLS CREATE A MORE COLLABORATIVE LEARNING ENVIRONMENT

Today’s business leaders expect college graduates will have the ability to collaborate, maintain good interpersonal skills, make decisions and problem solve—valuing these above technological know-how. As Jason Meneely, a professor in the College of Design, Construction & Planning at the University of Florida notes, “The problems in today’s world are complex and the pace of change imposes a short shelf life to the knowledge students acquire. We can’t emphasize knowledge as a fixed quantity. We need to teach students not only how to acquire knowledge, but to be problem solvers, how to think and operate when they don’t have all the information.”⁴

To meet these business demands, professors must shift from the traditional lecture model to a collaborative-based model—emphasizing problem solving and teamwork. Video walls can improve those skills and meet those priorities.

Taking Collaboration to a New Level

One university has successfully used video wall technology for collaborative learning through moveable visualization clusters built and installed for partner universities around the world.

Built with narrow-bezel display panels, the moveable walls allow simultaneous video conferencing and large-sized data set visualization. The university’s global research teams use the visualization clusters to foster multidisciplinary studies and collaborate through the Internet. The common goal is to take ideas beyond theory and into practice to accelerate innovation.

As part of the project, the university built a virtual room composed of three large walls of stacked visualization clusters. One of the walls is a 2-by-16 array configured in an outward-facing square.

Collaboration Beyond the Classroom

Video walls are also enhancing collaborative learning through campus libraries. “The changes going on in the classroom are beginning to migrate to the rest of campus,” says Tod Stevens, partner of SHW Group, an architectural and engineering firm specializing in educational environments. “The classroom experience is moving out to other spaces so collaborative teaching and learning can happen, and the library is the paradigm.”⁵



NCSU’s James B.Hunt Library creates a sophisticated intellectual and social opportunity for campus community and collaboration.

At North Carolina State University’s (NCSSU) James B. Hunt Jr. Library—one of the most technologically advanced campus libraries in North America—AVI-SPL worked with NCSSU to implement video walls throughout the facility. Each installation dramatically increases collaborative and interactive learning. “From its Gaming Lab to its Art Wall to its iPearl Immersion Theater, the Hunt library as a traditional library wouldn’t work because that wasn’t the main focus,” said Maurice York, director of NCSSU’s IT department. Instead, York describes the library as a technology sandbox for the campus, one able to support rare and experimental technologies that could be shared among the colleges.⁶

For example, in NCSSU’s gaming lab, students play and study video games for new and classic systems on a 5-by-16 video wall array. Not only does this space create an innovative hands-on learning environment, it provides an opportunity for students and faculty to collaborate on new gaming techniques and ideas—an opportunity they could never get in a virtual classroom.

4. VIDEO WALLS PROMOTE SCHOOL IMAGE TO PROSPECTIVE STUDENTS

As tuition for higher education continues to climb, more prospective students want to feel that their school of choice is not only the best choice, but worth their investment. One way universities around the country have tackled this problem is by creating “showpieces” on their campuses—special public spaces that stand out and really resonate with prospective students. Often, a key component of these types of spaces is the installation of large, dynamic and engaging video walls.



Officials at Florida International University’s School of International and Public Affairs outfitted the school with video walls enable easy collaboration and distance learning.

Video Wall “Wow Factor” Attracts Students

One way to use video walls to attract students is creating flagship spaces. For example, in its new School of International and Public Affairs (SIPA), Florida International University installed a video wall outside the entrance to its auditorium. The wall of 16 LCD displays appears to float just off of the angled wall. It not only allows students and guests to watch auditorium presentations, but it is an eye-catching and memorable component of the new SIPA building.

Another university installed an eye-catching 8-by-6 video wall housed in a wood-paneled enclosure in its School of Medicine’s new School of Public Health facility. The wall receives and informs faculty, students, staff and visitors as they enter the lobby of the new building.







In both these instances, video walls helped create a distinctive opportunity for higher education institutions to showcase their cutting-edge technology and their advantages over other institutions. From prospective students to potential donors, these types of “wow factor” video walls succeed in creating a memorable experience—one that often remains with visitors when they are considering where to invest their money.

VIDEO WALL TECHNOLOGY MAKES THE GRADE

Video walls are popular on campuses not just because of their large scale and eye-catching content. They also offer an all-in-one solution to multiple challenges. Built from LCD display screens, video walls offer an appealing scalability. From small classroom video walls of 2-by-2 displays to large public walls using dozens of displays, video walls can be configured for almost any shape or size desired and customized to fit any budget or application.

Video walls also now offer many advantages over large projection-based displays. Unlike projectors that have costly bulb and filter replacements, video walls require no maintenance and are often easier to install. Video walls do not require uninterrupted space in front of or to the rear of projection media to eliminate shadows and silhouettes. LCD screens also provide substantially brighter images in a variety of demanding indoor and outdoor lighting situations. And with the introduction of thinner bezel displays, video walls offer a virtually seamless viewing experience.

Making the Grade

					
<p>Scalable Easily scalable to fit any space or budget</p>	<p>Seamless Viewing Experience With new thinner bezel displays</p>	<p>Flexible Use Provides interchangeable content to inform students, show movies or conduct research</p>	<p>Lower Costs Can be less costly than other solutions due to lower LCD display costs</p>	<p>No Maintenance No costly bulb or filter replacements and includes 24/7, 365-days-a-year support</p>	<p>Brighter Images Substantially brighter images than other solutions in difficult ambient lighting solutions</p>

Other advantages to video walls are their 24/7, 365-days-a-year support and lower LCD costs. For example, when one university looked at its options for a large display in its auditorium, they found that a video wall solution, compared with the cost and maintenance of a high-end projector, would save the university \$35,000 over a five-year period.

The flexibility of video walls makes them showstoppers wherever they are installed. With one video wall you can display engaging content, stream live feeds, show movies, display art, and enhance research and collaborative learning. This is why video walls are becoming the communication tool of choice at top higher education institutions.

CONCLUSION

With increased pressure to meet the demands of education and prove their relevance in a competitive market, higher education institutions must invest in education-based technology and they must market these investments to increase student enrollment. From large public space displays to research labs to classrooms, video walls can make a significant difference in how a university is perceived.

Eye-catching video walls provide an exceptional opportunity to capture the attention of today's technology-oriented students. The walls reinforce not just a university's technological wherewithal, but also its ability to accommodate collaborative learning environments and hands-on research. Video walls can signal to students that the university values the role of technology in education and is willing to provide resources that set it apart.

LEARN MORE

To learn more about video wall technology and other technology-based education solutions, visit <http://www.avispl.com/markets/education/>



About AVI-SPL

AVI-SPL engineers, technicians and professional development staff know how important it is to understand the challenges currently facing educators. In classrooms, common areas and across school locations, AVI-SPL implements collaborative and interactive environments that work within the school's mission. A site assessment ensures that solutions simplify the process of teaching students and communicating announcements while meeting the school's goals.

AVI-SPL has a strong history of technological innovation in the higher education sector and works closely with its customers to identify the best solutions for the challenges they face. AVI-SPL then partners with component, software and system vendors to create its solutions. As a technology agnostic partner, it is able to integrate its designs with any devices and systems.

References

- ¹ Barber, Michael; Donnelly, Katelyn; Rizvi, Saad. "An Avalanche Is Coming: Higher Education and the Revolution Ahead." IPPR. March 2013. <http://www.ippr.org/publication/55/10432/an-avalanche-is-coming-higher-education-and-the-revolution-ahead>
- ² "Case Study: Rice University Selects AVI-SPL and Barco for Advanced Visual Integration." <http://www.avispl.com/rice-university/>
- ³ Tugend, Alina. "What It Takes to Make New College Graduates Employable." New York Times. June 28, 2013.
- ⁴ "Innovation Enters the Classroom." 360steelcase.com Education. Fall 2010. http://www.steelcase.com/en/Resources/industries/education/Documents/360%20Education_individual%20articles/360_Education_Innovation%20enters%20the%20classroom.pdf
- ⁵ Making Noise in the Library. 360steelcase.com Education. Fall 2010. <http://360.steelcase.com/articles/making-noise-in-the-library/>
- ⁶ "Case Study: Christie Helps Visualize Research and Collaboration at the Hunt Library." http://www.avispl.com/north-carolina-state-university-hunt-library/#full_story