VIDEO EXPERIENCE

The Evolving Landscape of Video in Higher Education

Student expectations are evolving. In their personal lives, they take for granted the ease of interpersonal connections — on their phones, on social media. They expect academia to mirror that experience.

THERE'S A RISING EMPHASIS ON "the importance of social belonging among our students, or how connected and accepted they feel among the campus student community," according to the non-profit organization **Behavioral Scientist**.

Video can play a key role in creating that sense of connection: In a recent **Educause** survey, 63% of respondents rated video as very important to their academic experience. While many in higher ed still struggle with outdated video systems and solutions, a modernized

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approach is essential in supporting the educational and social needs of today's learners.

There's a real urgency to address this, as higher ed becomes increasingly competitive.

"You have a generation of students that is used to interacting with video on a daily basis," said Justin Miller, Technical Pre-Sales Consultant at Vizrt. "If video is expected, and an institution doesn't have it, that may not be a place that a student would want to attend."

The Challenges

A number of challenges may hinder both IT and AV teams from making best use of video.

Outdated solutions are overly complex and difficult to manage. It takes time and effort to run cables, to set up for broadcast, to ensure connectivity. Devices can't talk to one another, and there's no way to seamlessly transition from one legacy input to another. All this leads to a fragmented end-user experience, and takes AV and IT teams away from pursuing higher-level tasks.

The educational experience suffers as well. Legacy systems aren't especially adept at video capture, and yet students need this. In-class students use capture for review, and off-site students demand it in order to keep up with work. "Capture also allows you to broaden the learning, for example by making it easy for guest lecturers to provide content," said Jeremy Morris, Channel Sales Manager at Vizrt.
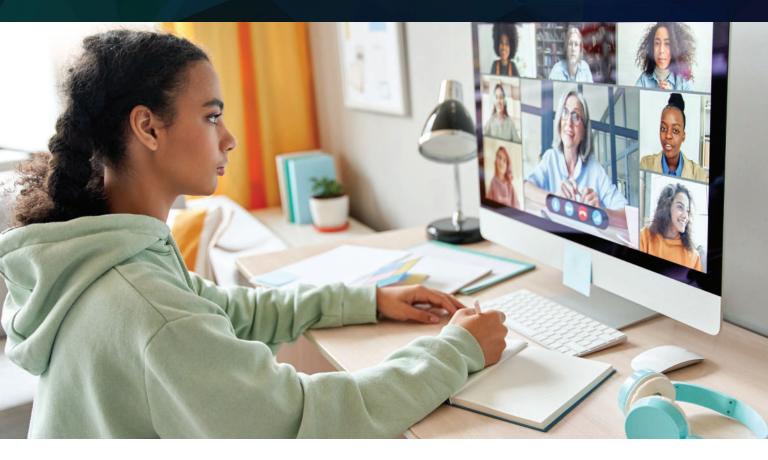
Conventional video also tends to be fairly static: A single view, from a single camera. "It gets to be a little bland and tedious, particularly for those things that need to be more demonstrative, where you need to see multiple perspectives," Miller said.

A modern IP-based video system offers a more flexible, dynamic, and engaging experience, but many are reluctant to take the leap. While IP is increasingly common in new facilities, some see bringing it to a legacy setup as potentially daunting.

"One of the biggest challenges is the mindset that you have to move wholesale from baseband to IP network," said Liam Hayter, Product Manager - Vizrt. "In fact, with recent advancements in technology, it is possible to transition in that world overtime, in a very easy and accessible way."

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The Way Forward

With a modernized, platform-based video solution, colleges and universities can bring to life the promise of video, while also making IT and AV teams more effective and efficient.

A platform approach offers simplicity, with common IP connections replacing heterogenous legacy cabling. It delivers scalability, with the ability to keep pace with ever-expanding demands for video content. Software-based solutions offer expanded capability, with sophisticated capture capabilities to drive improved learning outcomes.

Modern solutions also offer a high degree of automation. "Teachers shouldn't be burdened with having to set up the camera, set up the scheduler, set up the recording," Morris said. "With automation, you can let teachers teach."

In order to move toward a robust use of video, it makes sense for higher ed audio-visual experts to work in close cooperation with their information-technology colleagues. With the move to IP systems, the AV and IT worlds are coming together: By aligning teams at the strategic-planning phase, schools can position themselves to make best use of modernized video capabilities.

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GAMECHANGER

RETHINKING HOW TECHNOLOGY IS USED IN EDUCATION

VIDEO SOLUTIONS

Upgrading Video: Tech & Infrastructure Considerations

A modernized IP-based video platform can help infrastructure-related concerns, as higher ed looks to make more robust use of video.

VIDEO IS A CAMPUS MUST-HAVE THESE DAYS. In one **recent survey**, 97% of education professionals agreed that video is essential to the academic experience, and 75% said video engages students more than text.

Technological and infrastructure concerns may hold schools back from making needed upgrades to their outdated video solutions. "While many colleges and universities are interested in using more technologies to support student learning, the top three barriers indicated are lack of awareness, inadequate deployment capabilities, and cost," **McKinsey** reports.

In order to take a path toward video modernization, it's worth understanding where the technical concerns may lie, and how best to overcome them.

• **Interconnections:** On campus, there typically exist a range of legacy video solutions, living side by side and not communicating with one another. In order to provide anything like a seamless experience, "you need a big box to convert everything; and it's all time-consuming, with extra money and hassle — assuming the converter gear even exists anymore," said Jeremy Morris, Channel Sales Manager at Vizrt.

• **Physical limitations:** There are practical considerations that limit the effectiveness of older video technologies. "Typically, everything exists in the learning space, or else on a cart that gets moved from place to place, so not everybody has access to it at the same time. It becomes a scheduling nightmare and it can't be centralized in any way," said Justin Miller, Technical Pre-Sales Consultant at Vizrt. "It's very labor intensive to manage all that."

- **Static location:** In legacy systems, campus video is just that: It's campus-based. "These are static devices that are built in a room, they are self-contained, and that just won't cut it in the modern environment," said Liam Hayter, Product Manager at Vizrt. At a time when schools are looking for ways to connect with a geographically diverse student base, "you need something that goes beyond the four walls of a room, beyond the classroom, beyond the campus."

A Modernized Approach

A modernized IP-based video platform can help to address these and other infrastructure-related concerns, as higher education looks to make more robust use of video.

With an IP-based infrastructure, "you're not putting traditional video cables or audio cables in the walls. You are dealing with only one tech cable type, known as Dnet cable," Hayter said. "Single-cable deployment is faster to install, cheaper to install, and easier to maintain."

Besides being vastly easier to deploy, this arrangement also leads to far greater flexibility. Those video signals "now are no longer restricted to just that room: They're available across your entire campus, and beyond," Hayter said. "That is a massive game-changer for education."

In one case, "a school music department enabled an entire orchestra to play together" from a range of remote locations, he said. "If your lecture is too popular to have everyone seated, you can turn on a screen in another room and have an overflow room. That ability to go beyond the room itself is a huge piece of the IP shift."

A modernized approach also puts greater control in the hands of the IT team, for example by addressing the rising cost and complexity around video storage.

Modern compression algorithms save space, "and the users can dial in the quality that they need, versus the amount of storage that requires, in order to align the storage with their actual needs," Morris said. "Higher resolution means larger file size, and this enables them to control that."

Ideally, a modernized video solution will interface seamlessly with a variety of learning management systems, giving schools maximum flexibility in their technology choices. And it will be readily scalable, with the ability to easily accommodate new and emerging technologies.

"You shouldn't have to completely re-engineer every time you want to make small changes," Morris said. "That interoperability between manufacturers, between parts and pieces, is a big step forward from what legacy video solutions can do. With this approach, you're building an infrastructure for the future."
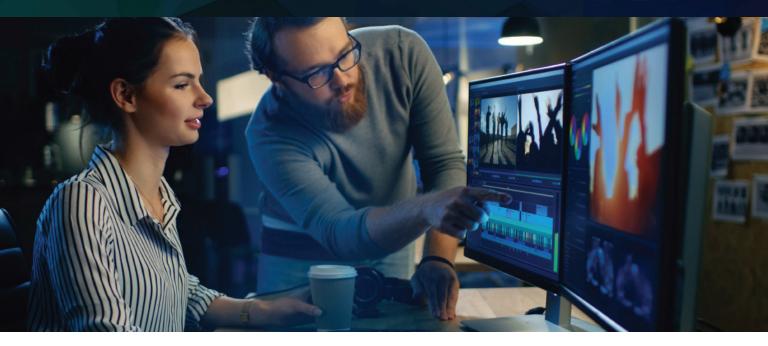
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Want to learn more about CaptureCast™ and how it can help your organization to become more productive, efficient, and inclusive get in touch today.

Visit **https://www.vizrt.com/products/viz-capturecast/** or **contact a Solutions Expert.**

ACCESSIBLE VIDEO

Game Changer: How Vizrt Supports Modernized Video Capture

Embracing technology to enhance video usage in higher education.

HIGH-QUALITY, READILY ACCESSIBLE VIDEO IS fundamental to the modern mission of higher education. Here, three leading authorities from Vizrt discuss the changing expectations among college and university students, and the tools available to help drive improvements. They are:
• Justin Miller, Technical Pre-Sales Consultant
• Jeremy Morris, Channel Sales Manager
• Liam Hayter, Product Manager - Vizrt

What are some of the challenges around video capture today?

Miller: With conventional solutions, it's static: You capture a single view. It gets to be a little bland and tedious, particularly for those things that need to be more demonstrative, where you need to see multiple perspectives.

Morris: Agreed! Are you doing something in a lab environment, or is it a camera that's fixed on whatever a lecturer is physically holding? Is it an overhead camera shot, or something medical where you've got to see the different angles of the procedure? All that matters from a content-creation standpoint, and also in terms of what you capture.

Why is capture such an important consideration these days?

Miller: First, you need capture as a way to support learners who may not necessarily be on-prem. In addition, some universities need to increase headcount faster than their construction budgets will allow. The rate of growth is outpacing their ability to house folks, or to get them into a single classroom. In those circumstances, video capture is important for delivering a shared learning experience.

Morris: And it's not just the students that you're trying to attract from all over: It's your guest lecturers. Capture also allows you to broaden the learning, for example by making it easy for guest lecturers to provide content. Modernized video capture makes that engagement and that interaction a lot simpler, easier, and more cost-effective.

What would a modernized capture solution look like?
Miller: You want the ability to create a composited image from multiple cameras, giving learners the ability to choose the perspective at any given moment in time.

We've got different ways to share that content, and for the end user to consume it. A student can view a wide-angle shot of the lecture, while someone else watching the exact same video can pick a different camera angle and see the closeup of the whiteboard for instance. We can handle the ingest, the recording, the streaming, and the consuming — all from one platform.

How does Vizrt help higher education to address the situation?
Miller: With CaptureCast, we have a complete, end-to-end, network-based scenario for video acquisition. It runs in an automated fashion, from the acquisition piece, through the packaging and live streaming piece, all the way through the packaging of the material for on-demand consumption later.

You simultaneously record and stream from multiple sources in any room, moving automatically between different setups for each session — at the touch of a button.

Morris: CaptureCast can be set to record a single session or a semester-long timetable. Each recording is enriched with metadata, which means that learners search content using keywords and can jump straight to the content they want, when they want it.

Hayter: In addition, CaptureCast publishes to live platforms and integrates with video management systems like Kaltura, OpenCast, Panopto simultaneously. Thereby, putting your institutions' content in the hands of educators and learners everywhere.

What makes you the "game changer" here?
Morris: It comes down to the scalability and flexibility. We're leveraging NDI® — Network Device Interface — an industry leading protocol, developed by NewTek which has become a defacto standard for connecting video devices over a network and is used in all vertical markets.

That allows for products that can scale easier and faster, and can integrate with other manufacturers. Other devices on the network can be seen and utilized, and then brought into the capture space — whether that's a different camera or other devices that can take advantage of an NDI® output.

Hayter: Thanks to having NDI® baked in, CaptureCast can wirelessly

Somebody may want to watch the facial expressions of the presenter. Somebody else at the same time may want to look at a camera that was focused on the whiteboard for instance. With a modernized capture solution, every learner can choose that experience on demand.

connect with smart phones and tablets, for example, turning them into camera systems. If you need a document camera or a close-up of an item for a demonstration, NDI® puts that power into your pocket.

Once everything is IP- and software-defined, you can pick and choose what you want, when you want it. With a virtualized process like ours, you can really make magic happen by capturing multiple teaching spaces at the same time on a single CaptureCast device.

Miller: We offer the simplicity and flexibility to add cameras as endpoints, as capturing devices. We create templates to do that, and those cameras just become additional sources. We automate aggregating all of that — running discovery and then handing it off to the data warehousing and learning management system of the university's choice.

How does all this help schools to achieve their objectives?
Miller: From an educator's perspective, video can be completely self-running and transparent to them. They can walk into a space and focus on presenting their content, not worrying about the technicalities about how it's going to be recorded.

Morris: For the AV and IT teams, they can leverage the existing cable that is in the wall. Now you've got camera access anywhere, and the admin can log in and have control over that camera system, so they don't have to touch physical hardware. With our solutions it is all a lot simpler, far more cost-effective, and flexible.

By capturing every moment, from every perspective, CaptureCast allows learners to interact with content as if they were in the room — live or on-demand.

Hayter: With CaptureCast, we're making it as easy as possible to take advantage of networked video and audio. It's actually reducing the pressure on everyone, enabling educators to focus on what they do best every day, every time seamlessly.

Thanks to having NDI® baked in, CaptureCast can wirelessly connect with smart phones and tablets, for example, turning them into camera systems. If you need a document camera or a close-up of an item for a demonstration, NDI® puts that power into your pocket.