



ALL YOU NEED TO KNOW ABOUT

IP-based
lecture capture



ALL YOU NEED TO KNOW ABOUT IP-BASED LECTURE CAPTURE:



So, what exactly is lecture capture? What about networked lecture capture? And how does it help schools, colleges and universities around the globe?

Lecture capture has been used by educators for many years but has surged in popularity since the COVID-19 lockdowns ended. There's now a growing acceptance of the benefits of hybrid learning, and collaboration via video content with a realization that video content can deliver real advantages for students and teachers.

In this guide, we'll explore the benefits of lecture capture in more detail and how academic institutions can best adopt the technology.

Designed to run autonomously to ease the lives of teachers, and better support students, lecture capture is the process of recording classes, lectures and science lab demonstrations through to complex STEM simulations, medical training and special events.

The videos are then made available for students to view live or on demand. Quality lecture capture is revolutionary

for students, especially in this age of hybrid learning. Now, students can take control of their education when it suits them.

Lecture capture has evolved dramatically in recent years. Now, it's possible to record lectures in professional quality video, while multiple feeds from any camera or screen can be recorded simultaneously, showing the classroom, whiteboard, presentation slides or computer screen.

The video content is then automatically and securely streamed for students to watch on any device – live or on demand. This control is incredibly important for students to learn effectively.



VIDEO IMPROVES LEARNING RESULTS

Recent research outlined in the *Review of Educational Research*, journal of the American Educational Research Association, analyzed more than 100 studies involving almost 8,000 students and the study found that when students were given videos instead of conventional teaching, average grades increased by several percentage points. When videos were used alongside traditional methods, average grades rose an entire letter grade.

It is known that retention and learning on a screen is affected by the quality and resolution. Research has found that students retain information when they are able to speed watch lectures without any trouble, further demonstrating how video-on-demand can help students learn at their own pace.

Lecture capture can be used in all areas of education, from elementary school, through to high school, college and higher education. The area of blended learning with video and traditional classroom styles has been steadily growing in the past 10 years, but the catalyst was the pandemic. Now, any modern school or university extends lessons beyond the walls of their institution.

In countries such as the US and the UK, *more than four in five* higher education institutions use lecture capture to provide students with recordings of taught sessions.

STUDENTS PREFER, AND PERFORM BETTER WITH HYBRID LEARNING

Before the pandemic, hybrid learning was heralded as the future of education, without ever breaking into the mainstream. But it took off in the wake of COVID-19 lockdowns when remote learning became a necessity. Having got a taste of hybrid learning during lockdowns, students are overwhelmingly in favor of continuing with it. According to a *global study*, more than four in five students

(82%) said they wanted at least some of their course meetings to take place online.

Research shows that students consistently regard lecture capture as a positive experience that enhances their learning and improves their satisfaction with a course.

CATCH UP WHEN YOU CAN

Not all students learn at the same pace. Some may benefit from repeating a lecture to ensure they have all the information and material they need to succeed on their course. Perhaps they couldn't keep up while taking notes in class; if so, lecture capture allows them to catch up. Maybe they didn't understand certain concepts during a lecture; if so, they can repeat it in their own time.

With robust blended learning technology, even students who are ill, late to class or simply unable to attend can keep up with their course without falling behind.

Lecture capture has also opened education for students who find it difficult to attend classes in person, allowing them to virtually attend whenever they are able. Research shows that lecture capture promotes inclusivity: among its key benefits are supporting students *with disabilities* or with *caring responsibilities*, and overcoming language barriers.

Students also report that lecture capture reduces anxiety, indicating that the technology may be a useful tool in creating an environment that supports mental wellbeing.



WILL HYBRID LEARNING REPLACE TRADITIONAL LEARNING?

Lecture capture recordings are intended to supplement, rather than replace, face-to-face teaching.

Lecture capture was feared by some to reduce attendance, but there is *little evidence of this*. Studies suggest that students can participate more actively in sessions when they feel able to take fewer notes.

Lecture capture is also easy to use. Teachers and instructors can focus on delivering a class, rather than technology. Today's IP-based systems automatically start and stop recording according to a teacher's schedule and publish the content so that it is immediately available for viewing by students.

For teachers, lecture capture makes their classes far more accessible to students. The recordings are especially useful for students who have caring responsibilities; learning difficulties such as dyslexia; or who speak English as a second language, as they can go back and listen again at their own pace.

It is also used *as a review tool, helping students to check their notes* and to prepare for their exams and assessments. Studies show that lecture recordings are most often viewed around assessment periods. Having lecture recordings available online gives students the ability to revisit and review challenging topics that they might not have fully understood within the lecture.

ADVANCING BLENDED LEARNING WITH AUTOMATION

Lecture capture technology has advanced in leaps and bounds in recent years. Institutions can now install IP-based lecture capture systems, like Viz CaptureCast, which connect any room across campus, and automate the

process of recording and delivering content.

Each recording is enriched with metadata so learners can immediately access content and search using keywords – jumping straight to the content they want, when they want it. Furthermore, chaptering content intelligently, has also been proven to increase learning retention.

IT departments install and centrally manage the lecture capture system, allowing educators to focus on teaching rather than technology.

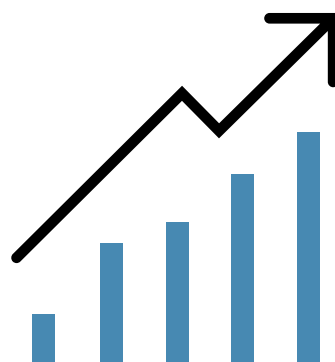
Lecture capture was vital for helping students to keep learning despite lockdowns but has since opened new opportunities for delivering education at a scale.

Lecture capture can help institutions to access the fast-growing e-learning market, which is expected to be *worth \$645 billion by 2030*.

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Source: Straits Research

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EDUCATION ESTABLISHMENTS ARE BENEFITING FROM LECTURE CAPTURE TECH

Lecture Capture Technology is a huge asset for educational institutions all over the world.

In this age of hybrid working, lecture capture technologies and systems are a powerful communication tool, connecting students, teachers and staff wherever they are.

The possibilities for lecture capture go far beyond hybrid working though. It can help in many areas such as delivering internal training at scale, streamlining onboarding, or recording important meetings for compliance purposes.

Each of its applications can help drive efficiency. Its use as a training tool, for example, can help to improve staff performance. This in turn can boost employee retention. One of the most important ways to retain staff is to give them the opportunity to acquire new skills through self-led learning in order to grow in their career.

COMMUNICATION AND CONNECTION IN THE REMOTE WORKING AGE

IP-based lecture capture systems combined with AV-over-IP technologies can connect colleagues wherever they are, from boardrooms to meeting rooms, or to the home office, to engage with each other or with students around the globe.

Four in 10 U.S. workers are currently working remotely part of the week or working entirely from home, according to a [recent Gallup study](#).

When in-person meetings are simply not possible, lecture capture allows education establishments to communicate critical messages, deliver training, break down complex topics, or align a team around a consistent message, especially when combined with unified communications such as Microsoft Teams and Zoom.

The videos can be watched live or be reviewed later so that employees can remind themselves of important information and messages.

Delivering content like this by video is a proven way to success.

[88% of businesses](#) say that video is crucial for their company's ability to foster corporate culture.



IMPROVE ONBOARDING, GUARANTEE RETENTION

Lecture capture can streamline onboarding new staff members and make for a more engaging and successful onboarding process.

New employees have a lot to learn in their first weeks. With lecture capture, pre-recorded content can be reviewed on replay to give new employees insight into the educational institute and its processes and people – freeing up time for managers and supervisors.

Lecture capture video training content delivers more engagement than alternatives such as text. Our brains are hardwired to retain visual information; viewers remember [95% of a message when they watch it in a video](#) compared to 10% when reading it in text.

[Research shows](#) that effective onboarding improves new hire productivity by 62% and new hire retention by 50%.

Lecture capture can also be used during the offboarding process, preserving a departing employee's institutional knowledge so that remaining team members will still be able to work effectively after they've gone.

88% of businesses say that video is crucial for their company's ability to foster corporate culture.

Viewers remember 95% of a message when they watch it in a video compared to 10% when reading it in text.

Source: Forrester Research / Inovia



BUILDING A VIDEO DOCUMENTATION LIBRARY

For schools and universities, lecture capture is an effective, practical and secure way to record important meetings, whether in HR or academic departments or the board room.

Lecture capture can act as a form of video documentation, ensuring that there is a visual record of events. Lecture capture helps academic institutes to build video libraries of key events and topics.

For example, an HR department might want to document important meetings on video – from onboarding to annual reviews and offboarding. Lecture capture allows the meetings to be securely filmed and stored, and then easily retrieved and viewed when necessary.

SO, HOW CAN SUCCESS WITH LECTURE CAPTURE BE ACHIEVED?

The benefits of lecture capture are clear.

The question then becomes how can educational institutions best harness these benefits? The answer is simple: by choosing the right technology.

To meet the demand for quality, guaranteed lecture capture solutions that drive participation and engagement, Vizrt has brought to the market Viz CaptureCast.

CaptureCast is a ground-breaking IP-based lecture capture system that is easy to implement and fully autonomous and bridges the world of AV-over-IP with NDI® and learning management systems in a purely IP centric way. CaptureCast is a distributed, scalable appliance that lives centrally on a network, removing the need for a device per room for capture.

Using CaptureCast, teachers or instructors can focus on what they're best at without worrying about technology. CaptureCast can be programmed to record a single session. Or it can be set to automatically record a semester-long timetable. The recording will automatically start at the beginning of each timetabled class and stop at the end of the class. All the professor needs to focus on is delivering the lesson.

For the staff members, CaptureCast is equally straightforward to use. It can automatically record, store and deliver training events, meetings or onboarding sessions – allowing the teachers to concentrate on productivity and performance rather than having to spend time learning new technology.

CaptureCast simultaneously records from multiple sources in any room, whether a PTZ camera, mobile or a laptop screen. From presentation slides to whiteboard text or lab experiments, remote viewers won't miss a thing and can choose which angle to view from at the touch of a button.

For educational institutions, CaptureCast publishes to learning management system platforms such as Kaltura, Panopto, Opencast, Vimeo or YouTube simultaneously so that viewers can stream the class content on whichever device they prefer and whenever suits them. The video can be securely stored or delivered directly over its platform of choice.

Each recording is enriched with metadata so viewers can immediately access content and search using keywords – jumping straight to the content they want, when they want it. For example, a medical student revising for an exam can search for any time the word 'cardiovascular' is mentioned in a lecture; or law students preparing for an exam can search for words recorded in a case testimony.

CaptureCast is an IP-based lecture capture and micro broadcasting service that connects any room across a campus or a business to anywhere in the world – all with the power of NDI, the defacto standard for compressed live video. NDI creates a single, interconnected production environment – one that can connect any device, in any location, to transmit live. This is achievable through establishing a video-over-IP network and using NDI's free apps that enable personal mobile devices like phones and tablets, as cameras to share content across an NDI enabled network.

Thanks to NDI, CaptureCast allows institutions to deliver remote video at scale through its NDI HX Camera and Capture applications.



THE FUTURE OF HYBRID EDUCATION IS NOW

Video has become an integral part of our society, seamlessly integrating into every facet of life. It serves as a universal medium for communication and global education.

Lecture capture technology like CaptureCast has become a must-have service for learners and teachers alike. For professors and lecturers, CaptureCast meets the growing need to communicate with remote students as well as driving engagement and productivity.

For education providers, CaptureCast helps to deliver remote learning at scale and with ease. It allows teachers to record and publish lectures online and students to review lessons and lectures anytime anywhere at their convenience.

Today, CaptureCast aids the delivery of high quality, impactful videos. Pre-recorded content can be reviewed on replay, or content can be accessed in real-time – empowering remote participants to take control of their video viewing experience and helping them to thrive in their learning.

Want to learn more about CaptureCast™ and how it can help your educational institution to become more productive, efficient and inclusive?

Get in touch today.

Visit www.vizrt.com/products/viz-capturecast/ or contact one of our Experts.

