

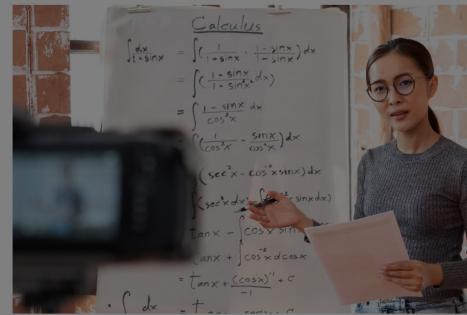


2022  
Special Report

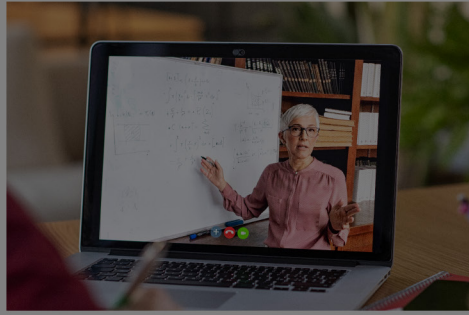
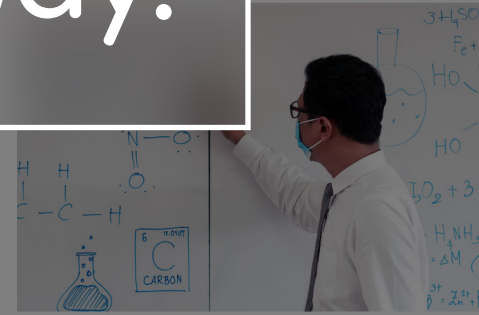
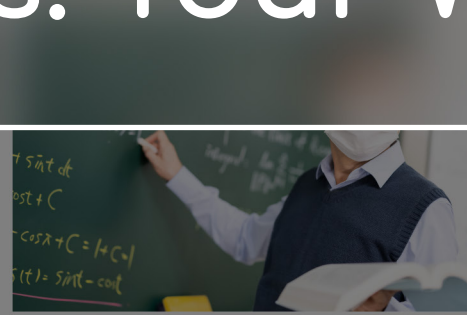
**Course Content  
Creation & Delivery**

eCAMPUS NEWS

Resources for Ed Tech Leaders



# Your STEM Courses. Your Way.



möbius

DigitalEd



## Return to Normal

Educators worldwide are being asked the question: “When are you planning to go back to school?” And no, this is not about plans after a well-deserved summer vacation or even sabbaticals taken during the last 18 months. It is about going back to school in person after more than a year of social restrictions. There is almost no question that you participated remotely outside your usual classroom—maybe from your home, temporary residence, or even a vacation spot. The discussion these days is about what the “return to normal” will look like.

The perfect path of how schools can “return to normal” has not been determined, but here are a few scenarios that are currently taking place:



***“Our school will be returning to normal.”***

Schools aim to revert to how things operated before the pandemic with restrictions such as class size limits, distancing rules, and vaccination requirements.



***“Our school will operate remotely due to uncertainties or laws in our area.”***

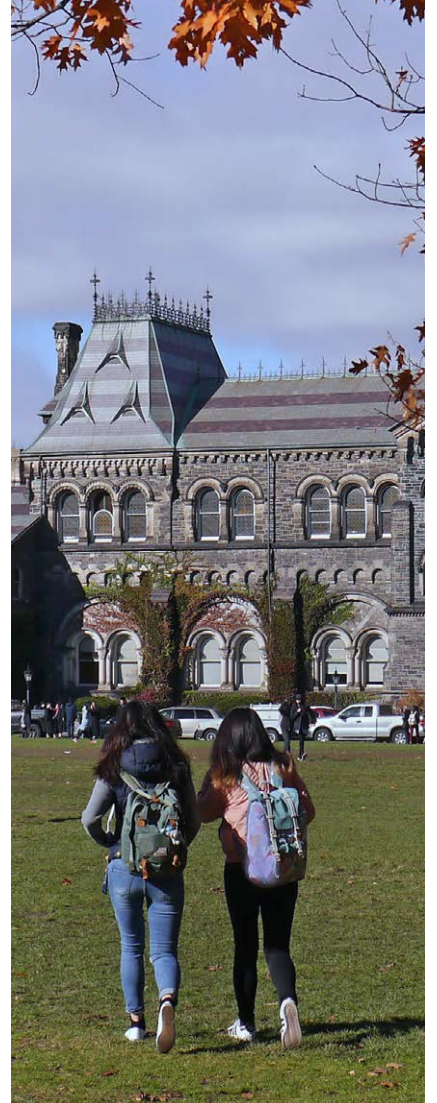
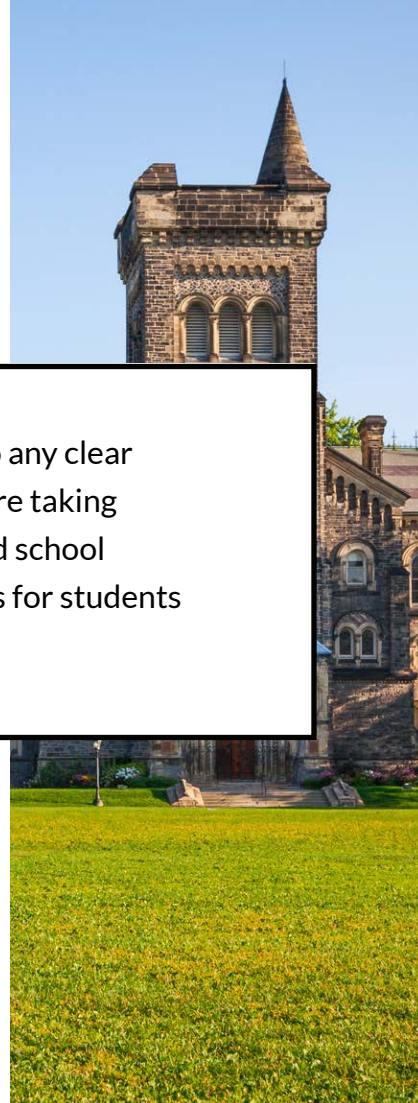
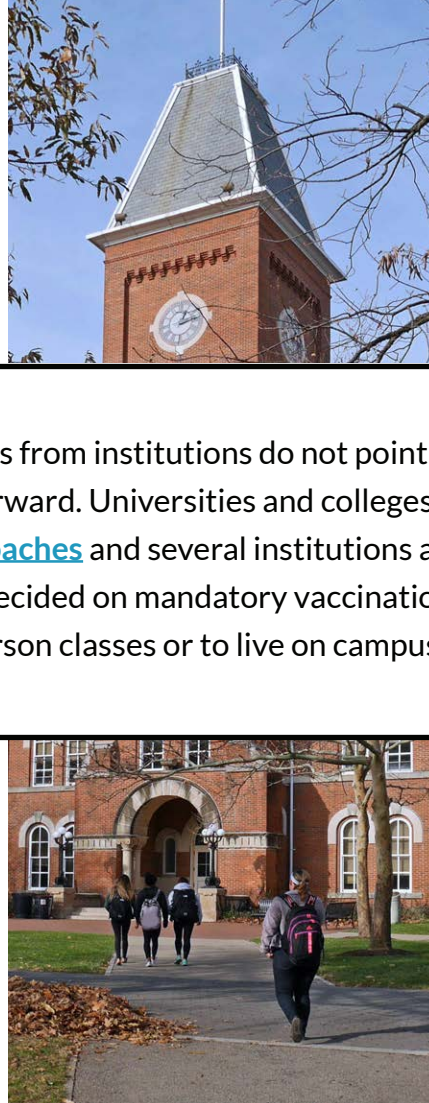
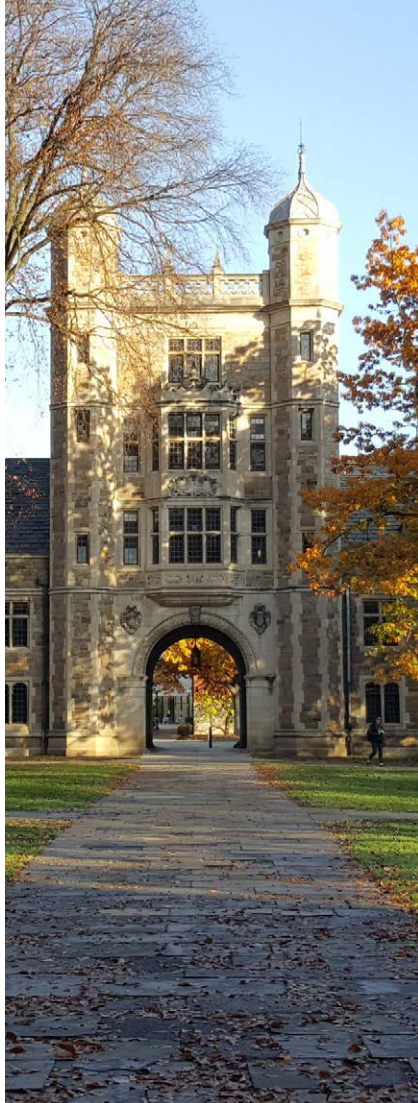
Not every region, state, province, or country will respond identically, and schools ultimately have to make decisions based on their circumstances and location.



***“Our school will offer a hybrid model.”***

A return to in-person classes, but will also provide completely remote options for those students who cannot or choose not to attend in-person classes.





Announcements from institutions do not point to any clear path moving forward. Universities and colleges are taking [different approaches](#) and several institutions and school systems have decided on mandatory vaccinations for students to attend in-person classes or to live on campus.

## Digital Academic Toolset

Based on all the uncertainty and all the potential options, one thing does become clear: you need a solid digital academic toolset to support whichever direction your institution is moving towards, and STEM (Science, Technology, Engineering, and Mathematics) will need to be supported.

While an institution typically adopts different tools at different times during its online learning journey, these last 18 months have challenged many institutions with how to proceed.

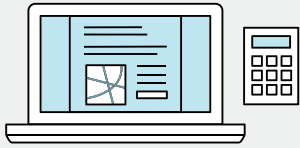
DigitalEd is here to help you navigate through the online world of STEM education wherever you are or wherever you may find yourself to be.



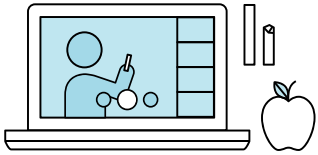


## Four Categories of Online STEM Education

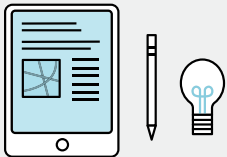
There are four categories of online education that institutions may fall under, and often they may shift between them as circumstances change. Still, wherever a school finds itself, Möbius is the best solution for your students.



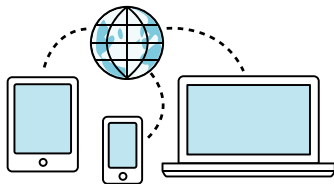
**1. Remote Evaluation** - *Written assignments online*



**2. Blended Learning** - *Both an online and a face-to-face classroom presence*

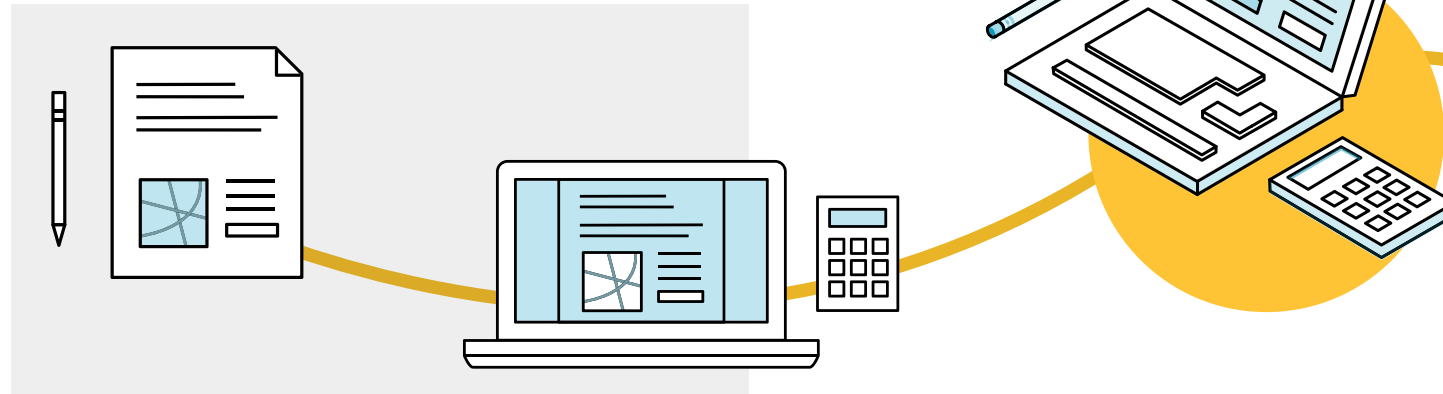


**3. Content Consumers** - *Flexibility to modify course content*



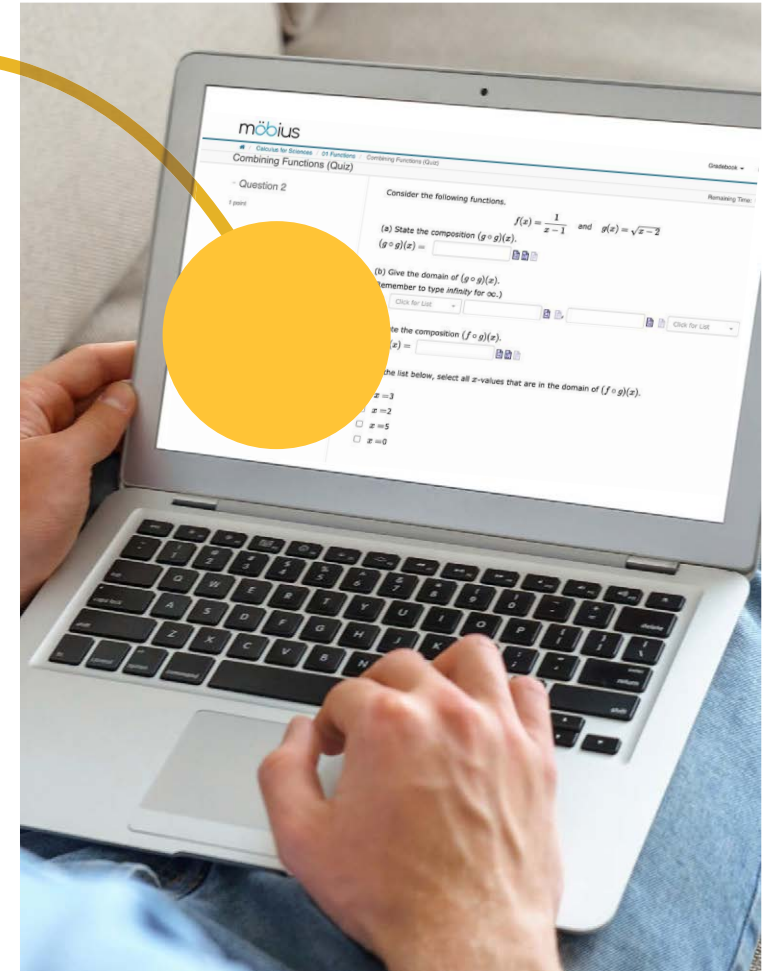
**4. Online** - *Roughly 100% online and thriving*

## Remote Evaluation



Many institutions move a portion of (or all) **written assessments to be online**, whether it is weekly homework quizzes, placement tests, or exams. In the early stages of the pandemic, many schools had to immediately, without much warning, move to an online digital format.

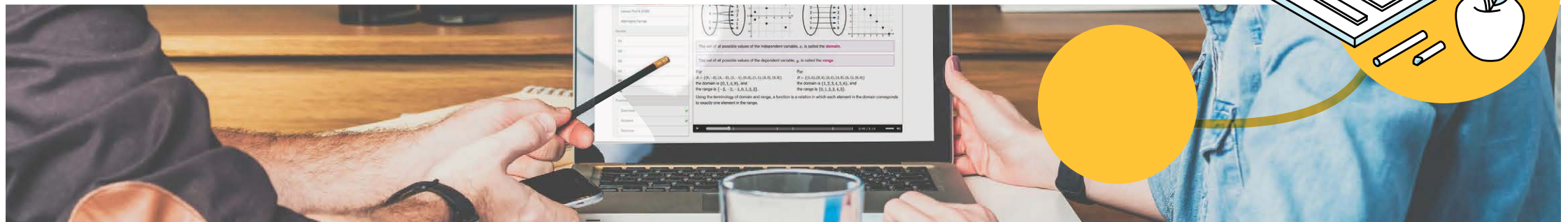
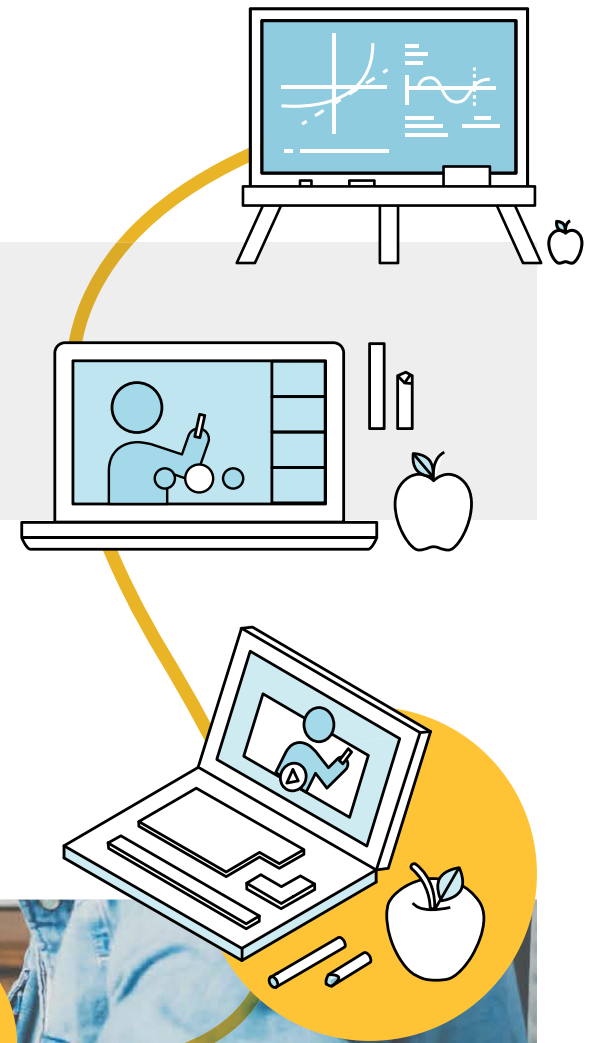
**With Möbius by DigitalEd**, you do not need to make sacrifices to your assessment options. Whether it is true algorithmic content, secure environments, over 50 different STEM questions types (which are all automatically graded), or open STEM questions with an infinite number of possible responses, **Möbius delivers your online assessments without compromise.**



## Blended Learning

Traditionally, blended learning was a single course with some content delivered online and some presented in the classroom. But with many institutions moving towards a hybrid delivery model, where some students may be fully online and others are using a mix of resources, the definition of blended learning is evolving. Regardless of how it is interpreted by an institution, course materials are needed for both online and face-to-face teaching styles.

**Möbius enables you** to consistently deliver your STEM courses entirely online such that your lectures, lessons, and course notes can be accessed from anywhere by your students. Supplemental materials for further studying and engagement are also available for both the online and in-person student streams. With total coverage of all your assessments, and the ability to analyze all of your students' grades and performance, instructors have the tools to see how every student is progressing and to make informed decisions regarding course delivery.





## Content Consumers



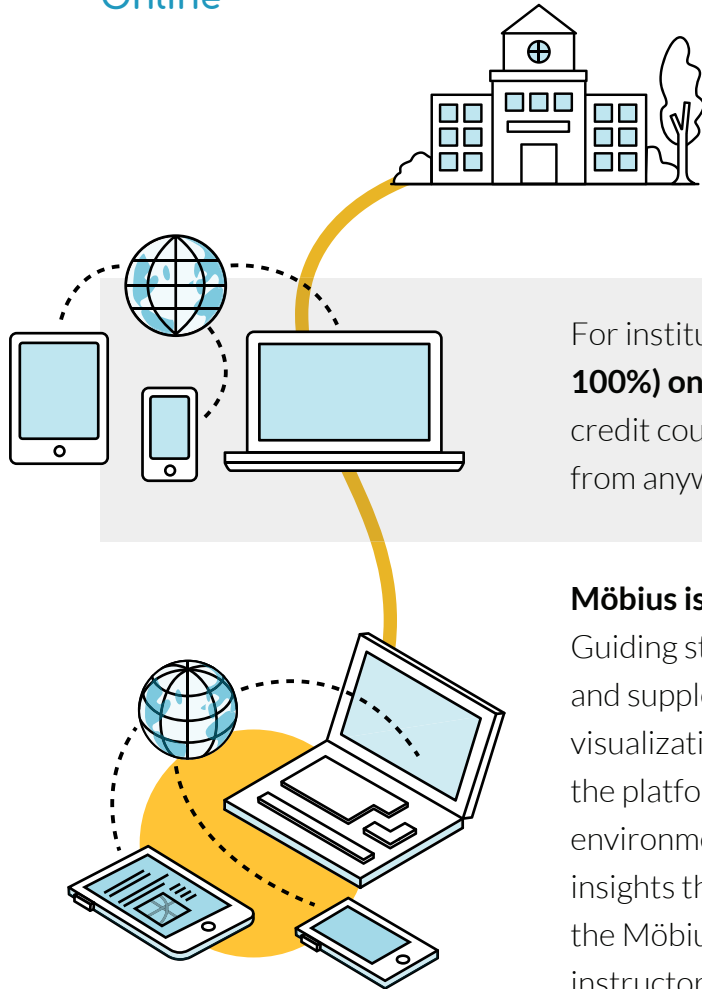
Institutions know that the quality of content they use is of utmost importance for online teaching and learning. As they explore the opportunity to build their online competencies, and put their courses exclusively online, they realize **they must have the flexibility to modify course content** to meet individual needs.

**Möbius Content Packs serve as a jumping-off point** for content consumers. Material can be tweaked as required using intuitive content editors, course delivery settings are easily managed with Policy Sets, and adjustments can be made to content at any time within the learning process.

Examples of out-of-the-box Content Packs in Möbius. [See the full catalog on DigitalEd's website.](#)

- Calculus I, II, and III
- Precalculus
- Developmental Algebra
- Intermediate Algebra
- College Algebra
- Trigonometry
- Statistics
- Linear Algebra I & II
- Differential Equations
- Physics
- Financial Mathematics
- Classical Algebra

## Online




For institutions that are running **100% (or nearly 100%) online**, their students are able to complete for-credit courses and certificates, diplomas, and degrees from anywhere.

### **Möbius is built to support full online course delivery.**

Guiding students at a self-defined pace, with lectures and supplementary materials harnessing the power of visualizations, interactive narratives, and captivating content, the platform keeps student engagement high and creates an environment for successful student outcomes. Data-driven insights through fundamental administrative tools such as the Möbius Gradebook and the Möbius analytics engine give instructors the necessary information to iterate and improve the delivery of online courses continuously.





Wherever your school is in their adoption of online teaching and delivery tools, and regardless of how your institution delivers online courses, Möbius by DigitalEd is a must-have for all educators as you guide your STEM students through their academic journey.



## About DigitalEd

DigitalEd is a cloud-based software company offering world-class e-learning solutions for the delivery of digital education. With a belief that continual learning is a key pillar in building successful societies and a deep understanding of digital education, we're helping to transform the way the world learns. Combined with our technical best practices, industry expertise, and partner ecosystem, DigitalEd supports educators to make learning better for everyone.

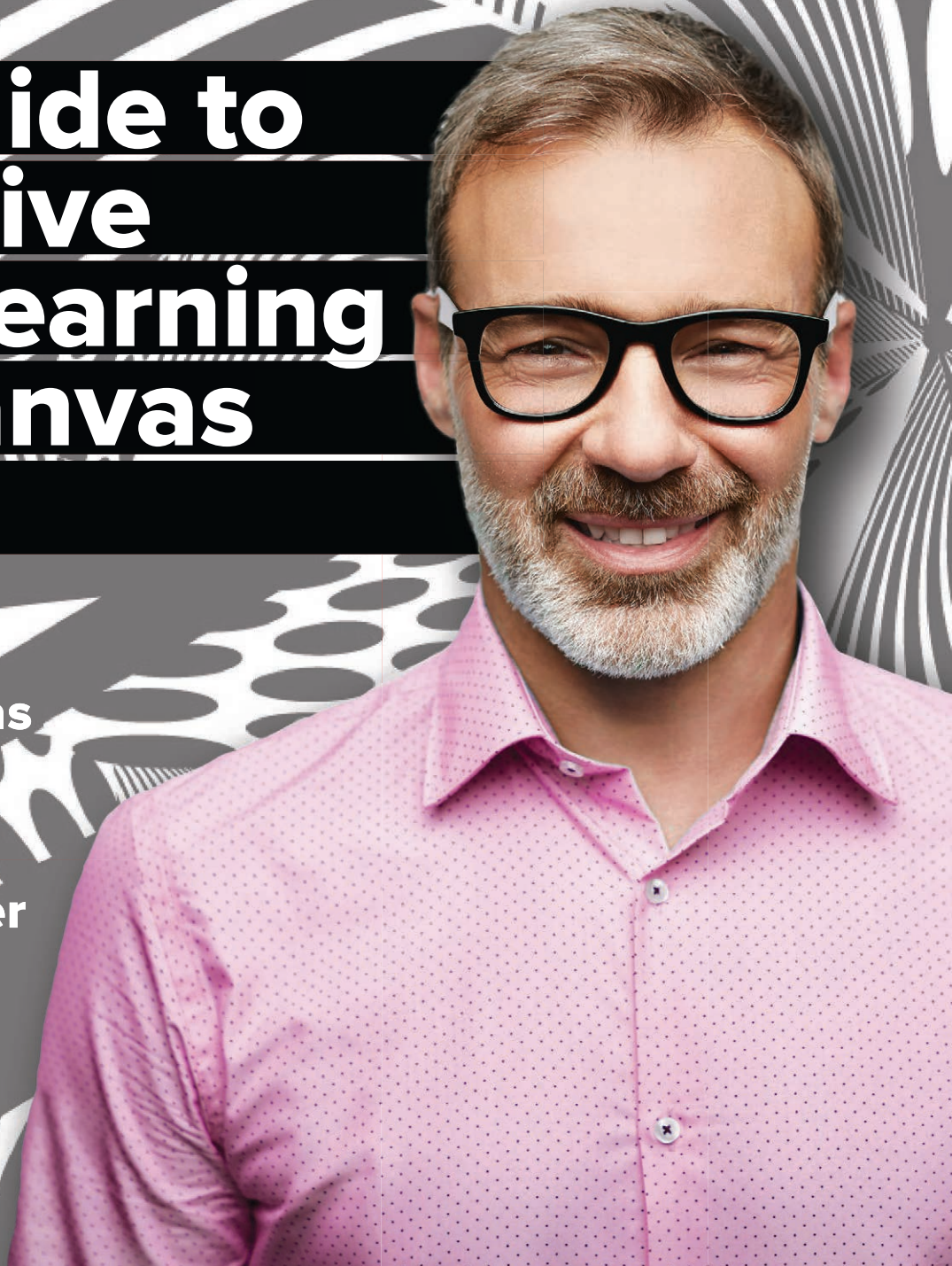
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 CANVAS

# Your Guide to Interactive Video Learning With Canvas Studio

Four ways Canvas  
Studio enhances  
teaching and  
learning and  
transforming higher  
education  
engagement.



# Connection Beyond the Classroom

The initial rush to remote learning has given way to a more measured and thoughtful approach to intentionally designed blended and online learning that's here to stay. And in many ways, technology-enhanced learning will continue to be the new baseline learning experience across education. This will allow schools at every level to be more prepared for unforeseen events that could disrupt the on-campus learning experience.

Once educators and students have a consistent, digital classroom within an LMS, they need tools that enable them to interact, collaborate, and connect. That's where the real learning happens. But how do you cultivate that connection wherever and whenever students are learning? How do you deliver interactive content that stands up to distractions outside the classroom? The answer is Canvas Studio.

This guide will help you unlock the power of interactive video learning and use video content to foster connection, collaboration, and growth. To stop collecting video views and start identifying exactly how much content students are retaining. To dive deeper into engagement analytics and learn more about how individual students consume, watch, and react. To move beyond curating content and start creating personal, effective, and interactive content.



## Your Guide to Interactive Video Learning With Canvas Studio



**Learn four ways Canvas Studio transforms engagement and enhances teaching and learning.**

- 1. Observation → Conversation**
- 2. Consumption → Comprehension**
- 3. Engagement Analytics → Learning Insights**
- 4. Content Curation → Content Creation**



# 1

## Observation → Conversation

Long-format recorded lectures are a thing of the past. With online and blended learning as the new norm, educators seek active participation and engagement rather than passive video playing. And, a video has the power to make asynchronous learning more engaging, allowing students to ask questions, rewind, replay, and learn at their own pace. After all, learning doesn't happen when information is simply absorbed or consumed. Learning happens when students are prompted to react, critique, interact, and ask questions in the moment.

Our recent study on the State of Student Success and Engagement confirmed that these connections between educators and students are more important than ever as they prepare to transition from classroom to career. Our survey asked 7,070 current students, administrators, and faculty from higher education institutions across 13 countries to identify measurements of student success and factors for engagement. The top criteria for student success today? Career readiness. The top challenge for educators? Providing hands-on learning opportunities that will hold up in a real-world context. Canvas Studio is a vehicle for providing interactive learning experiences that are engaging and rigorous enough to prepare students for the job market.



"Whether it's our cosmetology students giving a perm, our nursing students giving a mock interview, or our lit students doing a poetry reading, it can be done in Studio."

—Judith Lea, Director of Technology Learning,  
Northeast Alabama Community College

## Why Canvas Studio?

### Educators can:

**Create, deliver, host, and organize video content from multiple devices.**

Whether you need to record a virtual course orientation, record a series of mini-lectures, demonstrate a skill, host a how-to tutorial, or create a video assignment submission, Canvas Studio has you covered.

### Facilitate discussions within a video for optimal engagement.

Embed discussion questions in video clips that prompt students to comment and critique the content as it's being consumed. Like an in-person classroom discussion, both educators and students will be able to read and react to other student responses in the comment feed.

### Students can:

**Engage with content by sharing questions and insights within a video.**

Students can participate in dynamic conversations while viewing a video independently with the ability to access and replay videos anywhere and anytime they're ready to learn. This provides a platform for students who might otherwise be passive and non-participatory in class to interact and participate asynchronously.

# 2

## Consumption → Comprehension

Educators and students agree: No one wants to watch a three-hour video. Even more importantly, it's nearly impossible to retain three hours' worth of information in one sitting without being distracted by other tasks or inputs. Research has shown that attention spans are shrinking rapidly in the digital age—down from 12 seconds in 2000 to 8 seconds in 2015. And as more and more students are learning online or asynchronously, educators are presented with the difficult but crucial task of creating and delivering content that breaks through the noise and holds students' attention. The solution? Opt for short, targeted videos and allow students to show what they know while watching.



“Most of our files are short snippets of content because that’s how we can engage our students the most. We want to capture and hold their attention. We do use Studio a lot to deliver class lectures in this format, and it’s been a lifesaver during the pandemic.”

—Judith Lea, Director of Technology Learning,  
Northeast Alabama Community College

## Why Canvas Studio?

### Educators can:

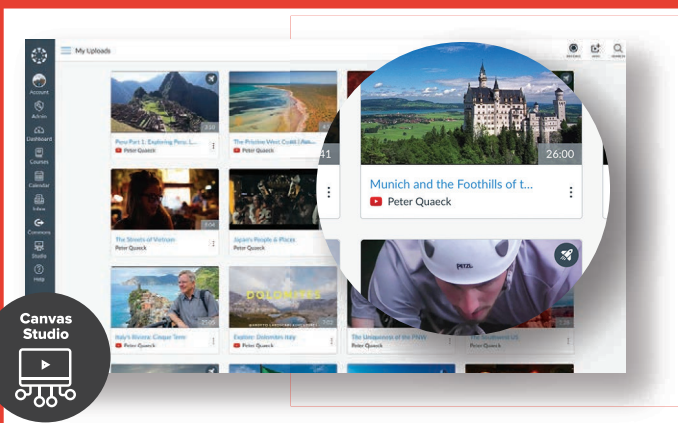
**Embed quizzes directly into a video clip to promote active engagement.**

By embedding quiz questions directly into the video timeline, students can demonstrate their understanding of a subject or skill as they go. These interim quizzes and assessments serve as valuable checkpoints for understanding so educators can evaluate instruction and adjust accordingly. Why wait for an exam to course correct when educators can instantly tell students how they did and provide targeted feedback using SpeedGrader?

### Students can:

**Apply their learning in the moment and demonstrate mastery of a subject or skill.**

When students are given targeted feedback early and often, they're more equipped to progress toward a learning goal or standard. Giving students the ability to instantly apply their knowledge of the content as it's being consumed contributes to greater retention and understanding.



# 3

## Engagement Analytics → Learning Insights

There's an important distinction between content that's been viewed and content that's understood, but how do educators measure this? How do they know which parts of each video hold students' attention and which parts are falling flat? When educators better understand how students are interacting with assigned video content, instructional content can be adjusted to improve outcomes and target individual students for remediation. It all adds up to deep, invaluable insight on how students consume video and how to engage with them more meaningfully based on their individual needs.

And it's not just the video content that needs to be engaged with but also the associated activities. It takes both technology and strategy to successfully integrate video into the online classroom. Canvas Studio provides in-depth engagement analytics so faculty can use their expertise to make timely decisions about what's working and what's not.



"The CNA program being offered in a hybrid format through Coastal Alabama's Canvas Catalog and Studio allowed me to go back and review lectures so that I was better prepared for exams and skills."

-Destiny Johnson, recently employed graduate of the Certified Nursing Assistant program at Coastal Alabama Community College

## Why Canvas Studio?

### Educators can:

**Analyze and evaluate how students are interacting with video content.**

Find out who's watching what videos and for how long. See overall class data at once or dig into each student's viewing details. Then use this valuable data to decide how to engage students further.

**Make data-driven decisions about course content and how it's structured.**

As Studio encourages active learning, it also provides a feedback loop for teachers and course designers to better understand what video content is effective. Then you can organize your videos to prioritize the most engaging content in the taxonomy that works best for you.

### Students can:

**Receive an accessible video content experience to support their learning needs.**

View auto-generated caption files and access a fully accessible video player in just a few clicks.



# 4

## Content Curation → Content Creation

Who said course introductions had to live within the confines of a syllabus? Who said assignment instructions had to be written instead of verbally explained? Who said all assignments and presentations had to be submitted in the form of lengthy documents? We don't know who made these "rules," but we know the best way to break them for optimal engagement. Even as online learning becomes more common globally, students and faculty alike value the face-to-face interaction and collaboration that technology supports but simply cannot replace. The power of video content and conferencing enables educators and students to stay connected even when they have to be apart. And it allows both educators and students to create, upload, and submit videos of their own—whether it be a presentation, demonstration, peer reviews, feedback, or a personal message. Talk about personalized learning!

"Our instructors found it very useful to have so many capabilities in one platform. They can connect with students, share videos, share a screen, do demonstrations."

—Ann Strickland, Director of Distance Education,  
Coastal Alabama Community College

"We've had a lot of departments utilize Canvas that haven't before," she said. "Everyone from academic advisors to the financial aid office has used Canvas in a variety of ways, especially recording videos to communicate with their students."

—Amy Mosley, CIS/OAD Instructor,  
Distance Learning Enterprise State Community College

## Why Canvas Studio?

### Educators can:

#### Easily access and upload media to courses.

With Studio, you get a personal media library directly inside Canvas. No need to store all your media in a separate system. Instead, easily access it with a single click on the Canvas global navigation and upload all your files. The seamless integration between the two systems enables you to expand your learning ecosystem in harmony. Plus, you can add other tools and apps, too! If you want to use YouTube content, bring that along for the ride as well.

#### Use Studio as a submission type in Canvas.

Educators can ask students to record a video explaining a concept or skill, then lean on integrated SpeedGrader functionality to apply rubrics and provide quick and targeted feedback in Canvas.

#### Bring personalization and knowledge to your courses with your own content.

The integrated content creation tools within Canvas Studio enable you to unlock additional ways to incorporate video into your course. Including but not limited to: Course introductions, assignment instructions, demonstrations, and supplemental course content.

#### Improve professional development.

Teachers are learners, too. And Canvas Studio can record, import, and store professional learning videos that can be delivered at scale and shared with individual teacher teams. Even collaborate and interact via video so you can learn at your own pace, all together.

### Students can:

#### Stay connected to faculty and peers.

Students can send pre-recorded videos to ask questions about assignments and projects and connect with faculty 1:1.

#### Become content creators and contributors.

Students can produce and submit their videos in Studio as well. Then you can easily collaborate and comment on each other's work. Students also get their own personal media library, along with our integrated content creation tools. It's a new world of integrating video into learning. Video assignments, peer review, group presentations—the possibilities are endless, and all of them happening right inside Canvas.



# The Canvas Learning Management Platform.

## Simple. Engaging.

## Open. Reliable.

The Canvas Learning Management Platform by Instructure is designed to deliver teaching, learning, and student success through an open, extensible learning ecosystem. This powerful set of highly integrated learning products gives institutions all the functionality they need and none they don't. And through open APIs and adherence to LTI standards, Canvas provides easy integration with a network of 400+ education technology partners to support your digital campus today and well into the future.

### Canvas LMS

This fully SaaS learning environment streamlines interaction and builds strong relationships between teachers and students, whether in the physical, blended, or fully online classroom. Districts use Canvas to provide access to guaranteed, high-quality learning materials across all subjects, ensuring learners equitable access within every class.

### Canvas Studio

This next-generation video learning platform turns one-way, passive video into inclusive, engaging, and productive virtual classroom discussions. Canvas Studio provides a robust set of tools for creating and delivering novel interactive digital learning experiences. It enables content creation, in-video discussions, embedded quizzes, and more.

### Canvas Catalog

It's a simple, modern, and effective way to promote your course offerings in a custom-branded storefront for your institution. Canvas Catalog can generate broad community awareness of your paid, free, and non-degree programs, as well as professional development courses. It's easy for students, administrators, and teachers to use, and it works with most payment systems.





## Modern AV That Keeps Up with the Changing Face of Higher Education





Universities and institutions of higher education have always been under pressure to solve complex technology challenges, but the pandemic has taken this to a new level. Now faced with demands for robust and high-quality remote connectivity, and the necessity to enable a wide range of hybrid learning models, campus IT and AV professionals are working diligently to design, deploy and manage AV networks to support the unique needs of their organizations — and to prepare to adapt systems to meet whatever the future may hold.

When setting up classrooms and lecture halls for hybrid or hyflex learning students need to experience class in an equal manner whether they are physically in the classroom or not. Professors need to communicate with both in class and remote students while ideally students are also able to interact with each other regardless of location. To facilitate this, a significant amount of AV gear is required – Microphones to pick up lecturers and students in the room, cameras and additional displays, computers to support video conferencing and LMS platforms, speakers to play audio from remote students and program content, signal processors to bring a variety of audio sources into the computer, and don't forget locations with amplified audio should support assisted listening devices. When adding all these devices to spaces AV

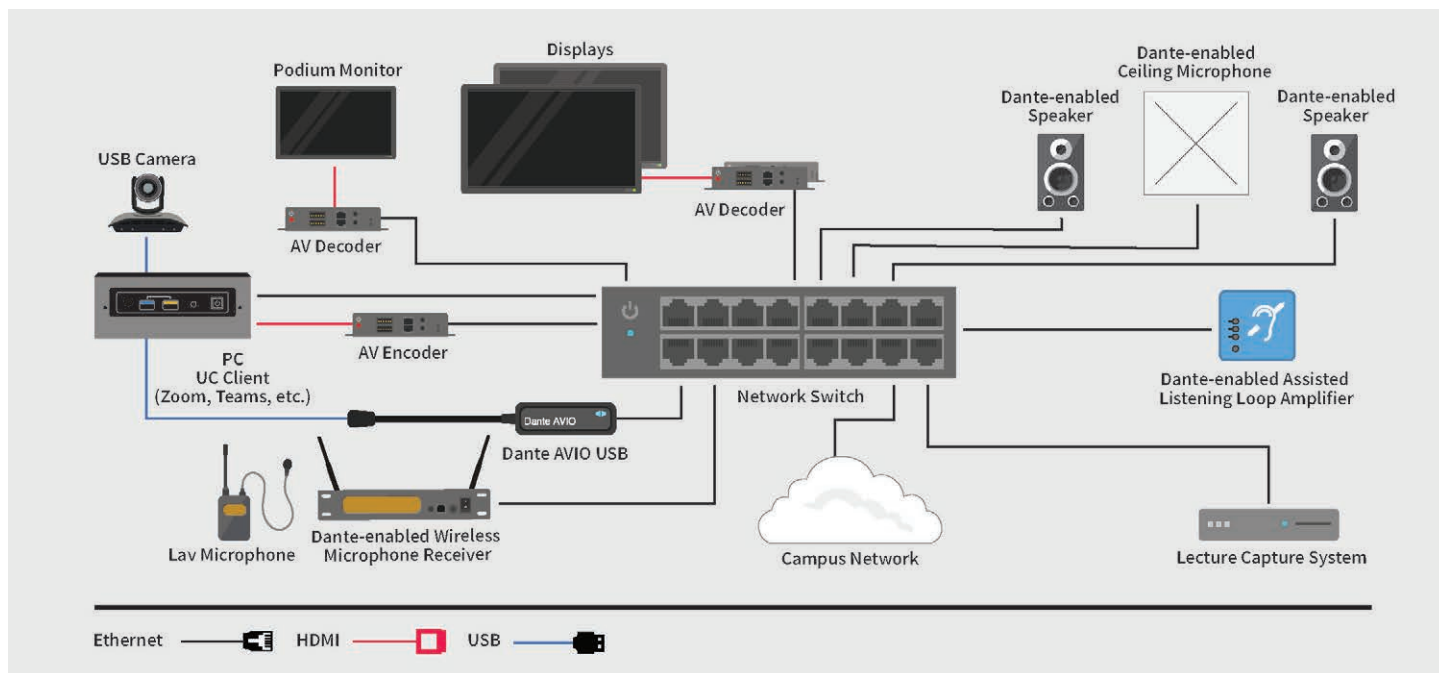
and IT teams are faced with the question– How do we make this scalable and supportable? Thankfully, these challenges can be easily solved using networking to distribute real-time media. AV-over-IP solutions like Audinate's Dante deliver reliable, high-quality audio over standard computer networks free of the problems that limit legacy systems such as noise, distance, scalability, non-flexible routing, and lack of monitoring and management support.

This paper illustrates how Audinate's Dante — the most popular AV-over-IP solution on the market by far — and Dante Domain Manager transforms how educators deploy, support, and maintain campus AV.

*“We're now in a situation where we would be ready to have everyone back on campus or go entirely remote. We're also ready for a hybrid scenario, where multiple rooms might need to be linked together and have a single presenter broadcast to each location. Regardless of what it looks like, we know we're going to be able to offer students the very best learning experience possible.”*

*~ Joe Way, Director of Learning Environments at the University of Southern California*

Networked classroom system diagram for hybrid learning.



## AV reimaged

When getting started with networked AV, a flat network topology of devices (or AV VLAN) is often utilized. While this might work great for small systems, as multiple AV devices are added across 10s to 100s of classrooms, seeing all devices visible and editable at once in configuration software, can be confusing and difficult to work with. One possible solution would be to divide the system into multiple subnets but this creates segregated islands of AV that cannot communicate with one another, limiting the benefits of networked AV.

Dante Domain Manager solves both problems of access and clarity. It lets you divide your campus network into separately managed logical groups called Dante Domains that can be configured to correlate to rooms, buildings, departments, or event spaces. Domains can be used to break up and add clarity to larger single subnet Dante systems, or Dante Domain Manager allows Dante systems to be deployed across any number of subnets. Dante devices may be enrolled in Domains from any location on the campus network for centralized monitoring and configuration. Domains make it easy to deploy campus-wide systems like public address without having to change the existing network topology, and even allows remote campuses' AV to be managed and supported by staff located at the main campus.

When a user views the Domain in Dante Controller, they only see the devices and connections within — other devices in other Domains cannot be affected. Domains simplify use of the system and prevent unwanted and unintended changes from interrupting service elsewhere on the network. When bringing devices online in new classrooms Domains keep existing Dante systems like those in theaters and stadiums running smoothly.

Domains are easily created and managed with Dante Domain Manager, with no need to rewire or reconfigure individual devices. Dante Domain Manager is vendor-neutral and works with any up-to-date Dante-enabled products, allowing domains to be comprised of any devices you choose.

*“We don’t want to have to go to a building with a laptop to make changes or to check things, Running Dante Domain Manager allows us to manage all those different subnets wherever they may be.”*  
~ Jim Wellings, Utah State University

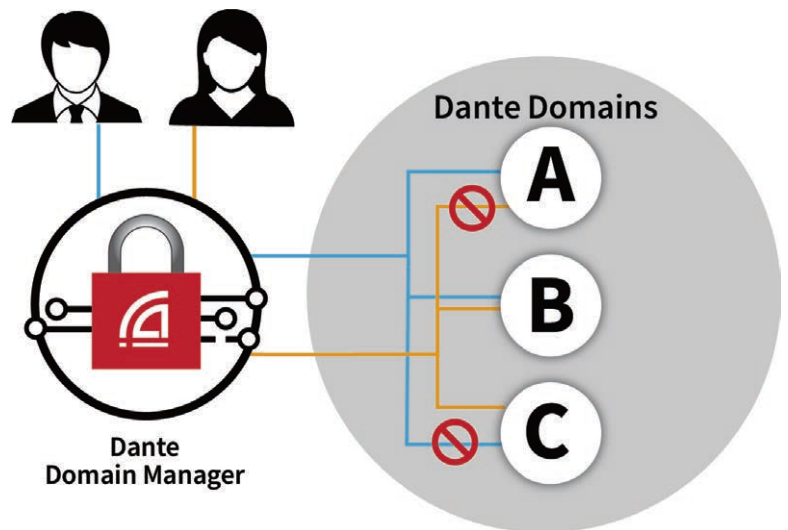
## AV connections now secured

Legacy AV systems have little, if any, concept of user security. Simply put: if you can reach the products, you can change them.

*“Until Dante Domain Manager came along, our security policy was just “don’t touch anything or you’re fired”. No one wants to work that way.”*  
~ Will Davidson, Media Systems Engineer at Brigham Young University, Idaho

In a campus environment, such a model forces AV departments to assign additional personnel to operate systems. This creates bottlenecks and increases costs. While there are lots of students who would like to learn and help, it can be risky to grant access to the entire network.

*Users are granted access to devices on a per Domain basis.*



Dante Domain Manager lets you securely give staff, faculty, students, and contractors access to specific areas of your AV network to run events and class projects. Rules are centrally administered, and each user must be authorized by an administrator to access Dante devices enrolled in Domains. The administrator can create roles for each user, from view-only to full access. Users may be defined within Dante Domain Manager or using existing services such as LDAP/Active Directory. This approach allows an AV department to confidently allow staff, faculty, students, and third parties to use the system with safe and appropriate levels of restrictions. Instructors may be given access to route audio in their own classroom. Select students may be allowed to use parts of the system for performances. And all this can happen without jeopardizing configurations elsewhere on the network. Tampering issues are eliminated, as are many unintentional mistakes.

## AV managed at last

In legacy point-to-point systems, cables and connectors dictate most signal paths. Configuration happens on devices themselves, and it usually requires a trip to wherever the gear is installed. This often means redundant equipment in different areas of campus, and a constant drag on AV department resources.

In a Dante system routing is done entirely at the logical level over the network. Ethernet cables remain static while channels may be reassigned and configured in nearly any imaginable fashion – a task that may be accomplished from any point on the campus network with simple software and appropriate permissions from a Dante Domain Manager administrator. The use of Dante Domains greatly simplifies the task of managing system organization and routing in safe and understandable ways, even over a distance. By dividing the system

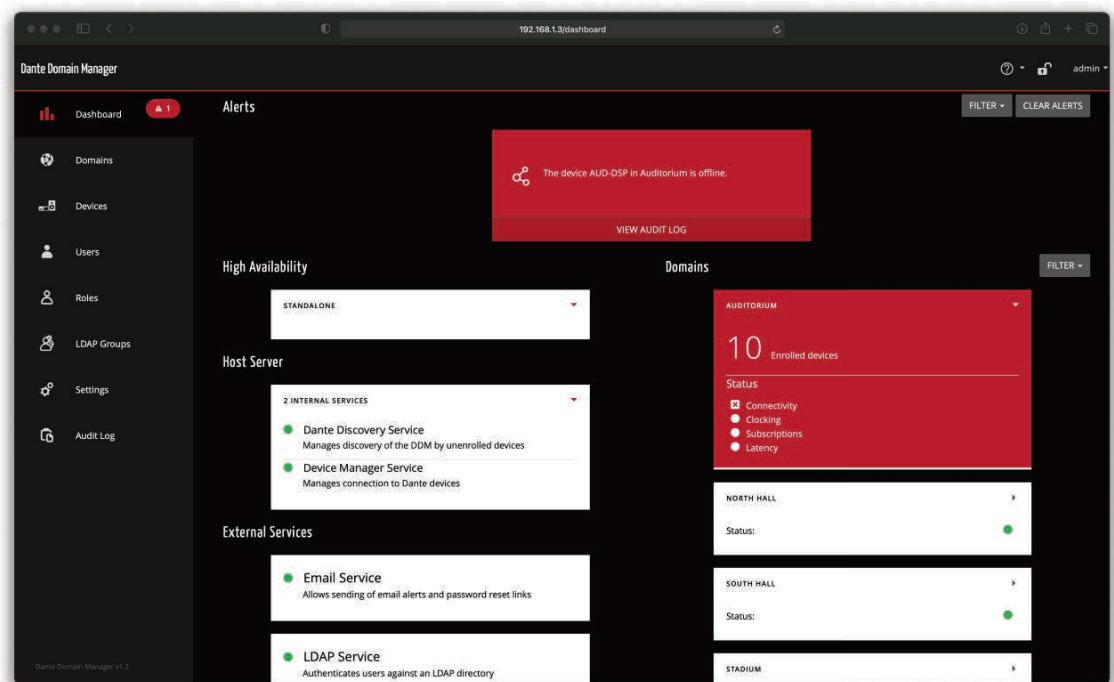
*Dante Domain Manager Dashboard alerting user to connectivity issue with device in the Auditorium Domain.*

into smaller, functional sections it is easier than ever for an administrator to clearly see how each domain is configured and by whom, while each authorized user sees only the devices for one domain at a time.

Dante Domains help maintain system integrity. Rather than allowing the system to gradually become more disorganized over time as pieces are borrowed, broken, and moved, Domains allow any administrator to instantly see the complete inventory of the AV system and take steps to ensure that all components remain in place and are working.

In legacy AV, it's a frustrating yet familiar drill: a connection fails, but no one bothers to mention it and so there it sits until an important event makes it a sudden priority. This sends staff scampering to solve the issue often on the other side of the campus.

A networked AV system with Dante Domain Manager stops this from happening. A user-configurable dashboard provides a complete set of real-time alerts to administrators, letting them know instantly if there is a problem and precisely where and what that problem might be on the Dante network. Unauthorized gear, device failures, user errors and latency or clock sync issues are immediately visible from any point on the network, while email alerts can be configured to keep administrators informed no matter where they are. Legacy system failures may induce head-scratching puzzlement, but Dante Domain Manager knows what's happening 24/7.





Complete time-stamped and user-tagged audits of all device and user activity allow administrators to clearly see patterns of use, helping them to spot potential problems before they become severe. Is one device power cycling twice a day? Now you know, and you can address it. Is there one user who makes many routing mistakes before arriving at the right set of connections? Perhaps that person needs some training - and now you know.

*“The less time you have to stand in a room fiddling with something in front of 200, 300 people, the better.”*  
~ Guy Eckelberger, Director of Information Technology, University of Oregon

## Conclusion

With the continuation and increased interest in offering hybrid and hyflex classes in a post-pandemic world, Higher Education AV systems are bound to keep expanding. A Dante network coupled with Dante Domain Manager offers educators a completely managed, easy-to-use, subnet-traversing solution that spans multiple vendors over an incredibly wide range of devices and applications. Only Dante with Dante Domain Manager supports the scale and range of vendors that IT and AV departments demand.

To recap, Dante networks with Dante Domain Manager provide:

- Domain organization for clear, easy management of the system by all users.
- Subnet traversal for complete coverage of all network regions.
- User authentication for to secure access control by staff, faculty, and students.
- Management, configuration, and support from anywhere using any connected computer.
- Alerts and audits to keep administrators instantly informed about all system changes and activities allowing issues to be quickly identified and resolved.

With more than 3,000 products from more than 500 manufacturers with which to deploy your system, Dante with Dante Domain Manager fits perfectly into AV designs for colleges and universities.

For more information about Dante, please visit <https://www.audinate.com>

