Facilitating Student-Centered Learning

Juniata Valley School District, a rural public school district in central Pennsylvania, has always been at the forefront of technology, offering Career and Technical Education Programs to prepare students for life after high school. The school district refreshed its classroom technology to foster new teaching strategies. The refresh included new teacher laptops and the ScreenBeam wireless display receiver, designed for enterprise environments.

After rolling out ScreenBeam in each K-12 classroom, teachers at Juniata Valley now have the flexibility to create a student-centered learning environment. With ScreenBeam, teachers can interact with the entire class while assessing student progress in real-time and providing individualized attention to students anywhere in classroom.

"ScreenBeam is secure, very cost-effective, and easy to deploy. These were all very important for us at Juniata Valley."

—David E. Christopher, Superintendent, Juniata Valley School District

Challenge: Teachers Tethered to a Projector

Traditionally, when teachers at Juniata Valley wanted to share lessons or videos from their computer to the classroom display, they had to connect their laptop to the projector via HDMI or VGA cables. This meant that teachers needed to deliver their lessons from a fixed location, typically in front of the classroom, in order to control the content.

"Over the last couple of years, we realized that with any technology we provided our teachers, whether it was digital content, smart boards, or learning management systems, fundamentally, our teachers continued to be chained to a projector," said Josh Wakefield, Director of Technology at Juniata Valley School District.

School

Juniata Valley School District
(K-12 public schools)

Population

800 students and 60 faculty

Number of classrooms

50

Installed

60 ScreenBeam Education Edition 2 receivers in classrooms, libraries, conference rooms, and auditoriums

Teacher Devices

Dell Latitude E7440 Ultrabook with Windows 7 and Intel WiDi

Furthermore, when teachers are fixed to the front of the classroom, it fosters a more traditional, lecture method of instruction. This didn't align with the district's vision for collaborative, student-centered classrooms. "Tethering teachers to cables and the classroom projector restricts teachers from gauging student reactions, assessing student progress in real-time, and interacting with students on a deeper level," said David E. Christopher, Superintendent of Juniata Valley School District.

As a result, the leadership team sought to find a solution that gave teachers the mobility to wirelessly share their lessons from anywhere in the classroom.

Selecting the Teacher Laptop and Wireless Display Receiver

Juniata Valley's IT staff searched for a teacher laptop that would bring a new level of interactivity into their classrooms. With hundreds of devices to choose from, the team narrowed down the options with two important criteria. The laptop needed to 1) include Intel WiDi and 2) work with Actiontec ScreenBeam, a wireless display receiver that attaches to the classroom projector.

Wakefield had discovered Intel WiDi and ScreenBeam through a technology director whom he met at Pete & C, an education technology conference in Pennsylvania. With Intel WiDi in the teacher laptops, teachers can share lessons on the projector screen wirelessly, with quick, reliable connections and low latency. "Everyday, teachers have a lot of content to cover in a short amount of time. Intel WiDi and ScreenBeam not only help eliminate cable clutter in our classrooms, but more importantly the two technologies enable our teachers to freely move around the classroom," said Wakefield.

From a financial perspective, "ScreenBeam was the least expensive solution that included all the features we were looking for." Christopher remarked. Unlike other streaming media players, ScreenBeam provides advanced security options to prevent students and outsiders from sharing inappropriate content on the classroom display.

During the selection process, Actiontec provided a free sample of ScreenBeam. As Intel's lead wireless display receiver partner, Actiontec wanted Juniata Valley teachers to have the best Intel WiDi experience from their new laptop. "The free ScreenBeam sample was a true time-saver. I was able to keep ScreenBeam to test a variety of laptops, and that was extremely helpful. Actiontec was so supportive throughout our process of updating classroom technologies," said Wakefield. Ultimately, the district selected the Dell Latitude E7440 for teachers—an enterprise-class Ultrabook that supports Intel WiDi and works well with ScreenBeam.

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> —David E. Christopher, Superintendent
> Juniata Valley School District

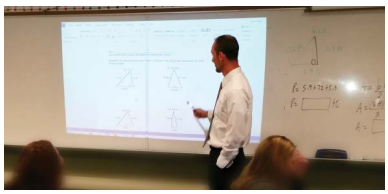
Deploying ScreenBeam

The process of deploying ScreenBeam was straightforward since IT strategically selected teacher laptops that natively support Intel WiDi. With over 60 receivers in Juniata Valley's classrooms, auditoriums, libraries, and conference rooms, IT staff set up the receivers to be easy for teachers and faculty to use. For instance, the name of each receiver included three parts: 1) school name 2) building name 3) room number. This naming convention allows any teacher to walk into a classroom and quickly pair their laptop with the correct receiver. Moreover, inserting a PIN is required only during the initial connection between the teacher laptop and ScreenBeam. The district also customized the background image of the ScreenBeam receiver; a picture of the classroom appears on the projector screen when teachers turn on ScreenBeam.

Training the Teachers

Professional development is an integral part of teaching at Juniata Valley. With the rising demand for wireless display in Juniata Valley classrooms, Josh Wakefield organized a full day of professional development for teachers about Intel WiDi and ScreenBeam. In the school library, Wakefield created three wireless display training classes—beginner, intermediate, and advanced. This gave teachers an opportunity to ask any questions about wireless display and practice connecting their laptop to ScreenBeam through Intel WiDi. Teachers learned how to mirror or extend content to the projector screen.

"ScreenBeam and Intel WiDi are very easy to use. Teachers in my advanced class picked up the technology in less than half an hour, and the majority of teachers in my beginner class were comfortable with the technology after the training session," Wakefield remarked.



ScreenBeam Fosters Student Interactions and Beyond

ScreenBeam has transformed classroom dynamics at Juniata Valley, as teachers now have the flexibility to securely project content anywhere in the room. "ScreenBeam is the cornerstone of content delivery in our classrooms. We're seeing many teachers share lessons from the back of the room instead of the front, and this new level of mobility has been increasing student interactions and collaboration," Wakefield commented. Moreover, "Teachers enjoy the fact that they can work closely with individual students as they keep the entire class engaged in the lesson. Pedagogy has shifted from traditional lectures to student-centered-learning," said Christopher.

For example, special education teacher Sara Leighty uses ScreenBeam to share worksheets, curriculum materials, videos, online manipulatives and

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Sara Leighty
Special Education Teacher
Juniata Valley School District

learning-based games with the class. “ScreenBeam allows me to more effectively use my time and resources within the classroom. Being able to manipulate what is on the projector from any area of the room saves time and lets me assist individual or groups of students at the same time.” High school teacher Bill Musser echoed this sentiment. “ScreenBeam gives me the freedom to monitor students while continuing with the lesson,” he said.

ScreenBeam has also been helping teachers multi-task. Using Intel WiDi’s Extend Desktop mode, teachers can show videos on the projector screen while grading student work, checking e-mails, or reaching out to parents on their laptop. Shane Cowher, English teacher and football coach, uses the extended desktop mode to take attendance on his computer while showing slideshows, interactive worksheets or other content on the classroom display. “The combination of ScreenBeam and Intel WiDi gives teachers a whole new workspace and twice the productivity,” Wakefield commented.

Furthermore, the administrators appreciate having ScreenBeam in their school’s conference rooms. Faculty presentations are more efficient, and ScreenBeam enhances collaboration during staff meetings.

Currently, the IT staff at Juniata Valley School District is evaluating Intel WiDi and ScreenBeam on Windows 10 devices. By Summer 2016, the district plans to upgrade teachers’ laptops to Windows 10.

“ScreenBeam is an essential teaching tool that has transformed the way our teachers interact with students. I’ve already referred dozens of schools who are interested in ScreenBeam.”

— Josh Wakefield, Director of Technology, Juniata Valley School District

IndustryLeader

ScreenBeam wireless display is the only solution that truly enables commercial deployment of secured and IT manageable wireless display. ScreenBeam wireless display is the industry standard for benchmarking and device interoperability, making it the most broadly compatible solution available. ScreenBeam solutions are used as the validation platform for wireless display functionality by companies like Microsoft, Intel, and leading PC OEM and device companies.

Actiontec is Microsoft’s co-engineering partner for wireless display technologies in Windows. Because of Actiontec’s status as the industry leader, and our ongoing investment in supporting industry device manufacturers, you can be assured that you’re deploying the most broadly compatible, feature-rich wireless display platform.

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