



EDUCATION

Apathy Undone.

Advanced technology helps motivate students in the Queensbury, New York schools.

What's the toughest problem teachers face in middle school and high school?

Motivating their students, says Matt Hladun of the Queensbury Union Free School District in New York. "When I was a classroom teacher, that was the part I had trouble with. I could handle kids who were difficult, but the apathetic ones were much harder."

Since leaving the classroom, Hladun spent four years as a third-party technology consultant for public schools across the State of New York, and now 13 years as Director of Instructional Technology at Queensbury. In these roles, he has had a chance to see how a large number of educators handle the motivation challenge, and how technology can be a positive force in the classroom.

At Queensbury, he believes putting Chromebook™ notebook computers into staff and student hands and low-maintenance, LampFree® projectors from Casio into every classroom has made a huge difference in the battle to inspire young minds.

Reversing the paradigm

Over the years, Hladun has observed that most children in kindergarten and the early elementary grades are excited to come

to school, but by middle school many lose interest. "The younger kids spend a good part of the day exploring content on their own or in small groups, but we change the paradigm as they get older," he explains. "Education becomes more teacher centric."

Technology has offered schools the chance to reverse the paradigm, to help older students become more involved with and excited about learning. "Now our students from grades two to 12 have a computing device at their seats, and teachers can become facilitators, guiding them to explore and understand the world."



Advanced Series

In 2011, Queensbury began equipping its schools with Chromebooks. "We were a very early adopter and bought the first ones to come out," Hladun recalls. "We fell in love with them, with how simple it was to get kids started and how easy it was to manage the devices centrally." The district began using Google Apps for Education in the same year. "This has been the sole platform that our students have been using for four years."

Another crucial step, Hladun says, was to take control of the time staff were spending maintaining the large screen displays used in

the district. The projectors he used to buy, he says, needed far more maintenance than other electronic systems, requiring expensive replacement lamps every year or two, plus frequent air filter changes and cleaning. Because projection lamps run very hot, the DLP or LCD elements, power supplies and other components would deteriorate rapidly, limiting the projectors' useful lives.

"I can tell you some of our older projectors were nightmares, far beyond the need to replace the bulbs," he explains. "By the fifth year most were done, requiring repairs that cost more than they were worth. Even with relatively new projectors, we were seeing failures at an alarming rate."

Rather than going to a larger, newer flat panel display, Queensbury replaced their displays with LampFree projectors because they felt they would be as reliable as any flat panel but with a much larger screen. Also LampFree projectors have no lamps or filters to replace and the light source lasts up to 20,000 hours.

That was a major problem, because Hladun has only three technicians to help him support more than 5,000 devices in the district, including the Chromebooks, other computers, servers, network switches, printers and access points, as well as the audio visual systems. "Our guys do a tremendous job, but I have had to make decisions to keep their workload manageable."

To limit service issues, the district began buying plasma displays back in 2003, finding them much more cost-effective than lamp-based projectors, but sacrificing screen size for durability.

In 2010, rather than going to a larger, newer flat panel, Dave Clough at Ray Audio Video, a long-term, trusted supplier, suggested the district look at Casio's new LampFree projection technology, which uses a hybrid LED/laser light source instead of a projection lamp. He felt they would be as reliable as any flat panel but with a much larger screen. There are no filters to replace, the light source lasts 20,000 hours, and because it runs so much cooler, the DLP element and other electronics are far more reliable as well.

"I suggested them because of the maintenance issue, but also because the district was trying to improve their green footprint," Clough recalls. "I knew the Casio would be attractive because it used 40 – 50% less energy, with no disposable mercury lamp."

Hladun purchased two of Casio's first LampFree model, installing them in middle school science classrooms. By the end of the 2010/2011 school year, he was ready to buy more. "That year, we were fortunate to get a grant to update classroom technology in our high school. We switched out all the displays over three years, installing the newest LampFree models into one third of its classrooms each year."

"There was a period when New York schools were not getting the state funding they used to," Clough explains, "so they were looking for technology that lasted longer without residual costs. With Casio laser/LED, I could walk in and show them just what they were looking for, a cool new product they could install and not worry about for seven to ten years."

A Powerful Combination

Hladun says the Chromebooks and the Casio projectors have proven a powerful combination, allowing teachers to demonstrate the tasks they want their students to undertake and guiding them to understand and interpret what they discover in their projects.

To a large degree, he explains, the choice of technology today is less about functionality than supportability. He likes the Chromebooks and the LampFree projectors not because they do their tasks much differently than other devices, but because they are reliable, easy to use and easy to support.

"Cost should never be the driving force. We initially paid more for our Casio projectors, although I'm not sure today whether they are cheaper or more expensive than others. But I do know that, compared to a traditional projector with a bulb, the Casio more than pays for itself over its lifetime."

"The LampFree projectors have been fantastic," he adds. "I can count on one hand the issues we've had with them over the last five years, and our oldest projectors are still going strong. As an early adapter you're taking a leap of faith, but in this case it really has been as good as it sounds."