



Case Study: Broadneck Elementary School, Benefits of Document Cameras over other classroom Technologies

The abundance of available K-12 classroom technology products can be staggering, and finding appropriate products to meet the needs of a 21st century classroom is a difficult task. Teachers, administrators, technology coordinators, and the like, are constantly being targeted for software products, hardware products, and everything in between at such a variance in price ranges that it is difficult to determine what will not only meet the technology needs of today's classroom, but will continue to be sustainable over many years without becoming obsolete.

When considering various technologies to implement into a classroom setting, an incredible amount of research is required to simply gain an idea of probable products to use. One of the most convenient ways to research available products is to attend school technology conferences. These conferences enable school representatives to not only see these products in action, but allow them to physically use and test the products on-site.

This is a similar situation Mrs. Theresa Brown, 3rd grade teacher at Broadneck Elementary School, Arnold, MD faced. Hoping to research and obtain new technology for her classroom, Mrs. Brown attended a technology conference to view her options. Following the conference, Mrs. Brown decided an Interactive Whiteboard would best suit her needs. She therefore petitioned her Principal at Broadneck for the funds to purchase, and was given the green light. The final step was to choose a brand, so she attended another conference to determine which would be most beneficial.

However, during her attendance at the conference Mrs. Brown was introduced to the AVerMedia AVerVision530 Document Camera. After viewing the product and physically using it, Mrs. Brown decided this visual solution would suit her needs much better than an interactive whiteboard, based on both performance and price.

Mrs. Brown stated, "The basic reason for choosing the AVerVision530 document camera over the interactive white board is that I knew I would use the document camera every day and right away. I knew the document camera would replace my overhead projector, which meant no more glare, no more heated surface, no more ink on my hand, and no more transparencies to clean. The interactive whiteboards, although powerful teaching tools, did not seem like something I would use every day and many of its uses seemed to require a lot of initial teacher prep time."

Mrs. Brown goes on to explain that the ability to display live documents and objects on a large screen in real-time is an incredible benefit the document camera has over an interactive whiteboard. Instead of making copies, scanning documents, searching for pictures, etc., the immediate display of her work, and student work spawned immediate feedback and instruction. "This was

very important to me because I frequently have students read their written responses which are sometimes several sentences long. I knew that if students could see the response as well as listen to it more learners would stay focused and be able to critique the written response. This would allow for immediate feedback, help visual learners and help everyone stay more focused on the topic."

Mrs. Brown noticed both immediate and long term benefits as she used her AVerVision530. Almost immediately, student attention increased as "larger than life" documents and objects were presented to them. Students were more apt to stay on task with clear live examples of lesson material and demonstrations made a greater impact on comprehension and understanding. The desire to participate and have their work displayed on the document camera motivated her students to be more organized and follow directions.

This desire to present completed assignments on the document camera eventually led to an increase in overall neatness. A greater number of students in Mrs. Brown's class made an extra effort to finish all their written tasks neatly. "I believe the document camera was a positive reinforcement that helped a greater percentage of students write neatly with greater frequency." An additional long-term benefit that sprung from this reward system relates to math problem solving. It is a difficult task to ingrain the practice of "showing your work" in math activities and the use of the document camera in this way encouraged students to show their work on homework and tests, which eventually led to higher scores as well.

Document cameras are a classroom technology that students can easily use to present projects and assignments. Additional scanning and preparation is not needed, allowing for instant comment on a live image display. The students in Mrs. Brown's class, excited to use this technology, readily volunteer for showing their handiwork in front of the entire class. Confidence is encouraged through interaction and Mrs. Brown believes that the use of the document camera has increased confidence in her students. "Average, below average, and above average students are equally eager to display their work on the document camera. Using the document camera means students do not have to read their work aloud to the class, so even shy students are more willing

to share their work. I think this is true because the class is focusing on the work on the screen rather than the person speaking. I never make a person display their work if they don't want to, but very rarely do I find a student not wanting to display their work on the document camera."

Although many technological solutions are available for the classroom setting, document cameras are cost-effective teaching tools that can be integrated with other forms of technology to improve the learning experience. Mrs. Brown uses her AVerVision 530 in conjunction with slides she has prepared on her computer, shifting back and forth between the two to explain and then demonstrate her lesson, whether it be about sentence identification, math equations, cooking or poster making. It has eliminated the need of her overhead projector.

Mrs. Brown explains how her document camera has affected the use of technology in her classroom, "Without a doubt I use the document camera more than any other technology. It has replaced my overhead projector. However, I use the document camera so much more than I ever used the overhead projector because it has so many more capabilities. I could never display mealworms or pill bugs on the overhead projector. Not only would we only see their shadows, but the heat from the lamp would most likely kill them. With the AVerMedia document camera I can project these creatures alone or in their habitats. How thrilling for the students to watch them crawl on the plant, on the soil, and burrow into the soil. Being able to zoom in on these critters was also exciting."

Another feature that Mrs. Brown benefits from is the maneuverability of the camera head and arm. Capturing images of her classroom or objects at odd angles around the camera have aided her lessons in science and chemistry when it is necessary to use a hotplate. This allows all of her students to grasp the concept of chemical reactions without having to crowd around it.

The integration of document cameras at Broadneck Elementary School expanded after Mrs. Brown began using her AVerVision 530. Currently eight teachers have implemented AVerMedia document cameras in their classrooms, with hopes for additional ones. Mrs. Brown comments on her final decision to integrate a document camera in her classroom, "Not only does it make teaching easier and more fun, it makes learning easier and more fun. The AVerVision document camera has helped mold my teaching style. It has become my right arm."

"The AVerMedia Document Camera has been the best teaching tool I have ever used. I have no regrets about getting the document camera instead of an interactive white board. The document camera has so many more functions and uses than I ever imagined. I continue to find new uses for it almost every day. My lessons and presentations are much more dynamic with the document camera. It makes teaching and learning more exciting. The document camera has helped me become a better teacher."

For more information about Broadneck elementary school, visit:
<http://www.aacps.org/AACPS/BNES/PROJECT.HTM>
For more information about AVerMedia Classroom Products, visit
www.avermedia-usa.com/presentation

