Interactive Products Division
Numonics Corporation
Case Studies

Numonics Interactive Whiteboard Paints a New Picture of Art Class

Case Study by Patrick Hildebrandt

Imagine trying to teach art without art. That was the problem encountered by Mike Derrow, an art teacher at John Marshall High School in Glen Dale, WV. He found that limitations in visually presenting art to his students hindered both his work and theirs. Holding up pictures, working out of a textbook, or watching a movie on a computer monitor or small television did not have the proper impact.

"It was often so difficult to appreciate the details, and the subtle nuances, of art," says Derrow.
That changed when Marshall County, home to John Marshall, began using Numonics interactive whiteboards in its classrooms.

The district had been using a competitive board previously, but County Technology Coordinator Bill Burrall decided to go with the Numonics Interactive Presentation Manager (IPM) after seeing a live demonstration. "Although [SMART] is a nice product, it did not come close to the features I found on the IPMII 2000 Numonics board," says Burrall, who also noted the ease of use was critical for teachers apprehensive of learning the new technology.

The IPM is an advanced interactive whiteboard. Using advanced electromagnetic technology, it becomes a powerful interactive environment when combined with a MAC or PC computer and a data projector.
All mouse control is centered in the multimedia pen, which allows the teacher or presenter to command all computer programs while remaining in front of the audience. The board also includes 17 user-definable Softkeys which can be used to instantly launch applications, websites, and Presentation tools such as Annotation Pens, Spotlight, Reveal, and a Virtual Whiteboard for note-taking.

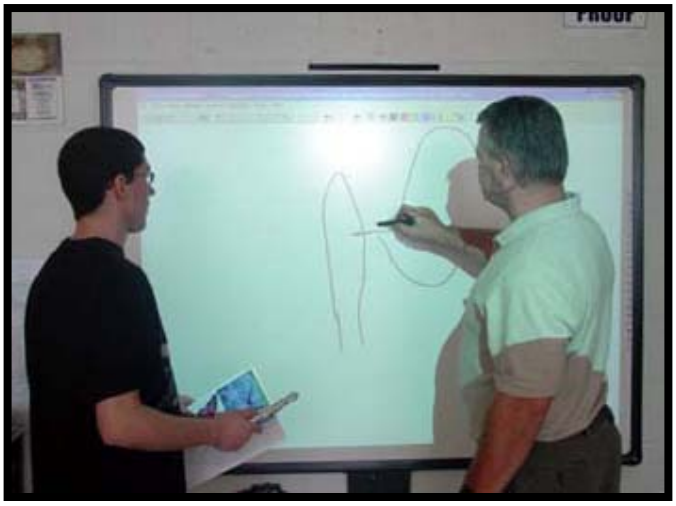
"You can't achieve the same effect by 'turning to this page in the book' or by using photos or reproductions."

John Marshall received the first board two years ago, and Derrow says that teaching hasn't been the same since.

“It has dramatically changed the way I present information,” says Derrow. He explains that the board, and its large 77” viewing area, has added a much-needed visual element. “You can’t achieve the same effect by ‘turning to this page in the book’ or by using photos or reproductions,” he says.

Overall, Derrow notes that the effect on the students has been nothing short of amazing.

“It makes for easier learning”, he says. With a large class, everyone can see the board clearly. It helps to focus their attentions, and results in better work. There is not only a much greater improvement in their understanding, but in their enthusiasm, as well.



“They just have a much better idea of what is being asked of them,” he says. “You simply would not believe the change in quality.”

Student Latasha Midcap agrees. "It's a highly useful tool for high school because it's influential in the learning process...students are more enthusiastic to participate when something visual is in front of them."

Derrow has started to use PowerPoint as a teaching tool, and is embedding images not only for class notes, but for the daily class agendas he puts on the board. He can also download movies on various techniques and the lives of famous artists, and embed those in his presentations.

“The neat thing is the ability to interact with the images in the movies and to allow the students to view these themselves if they have been absent,” he says.

Besides being visually impressive, the features of the IPM have also made an impact. The annotation pen is one of Derrow’s favorite tools, as it enables him to annotate live over any document, application, or website.
One project focused on the Oaxacan carved animal sculptures of the Zatopec people of Mexico. Using the board, Derrow projected a map of Mexico and used the red pen to outline the Oaxacan state borders to show students its location.

When the students were required to create paper mache models based on those sculptures, Derrow had to explain the concept of an armature, the framework the students would use the build the sculptures.
He projected an animal photo and annotated an armature on top of the photo, demonstrating it as a “skeleton” within the animal.

“This action really clarifies the concept of what an armature is for my students,” he says.

If a student is absent, Derrow says, the board makes it easy to help them catch up. Using Virtual Whiteboard, he can capture and print out session notes and have them ready when the student returns to class. He can even attach photos he used during class to help make the notes more meaningful.

The technology also provides students with opportunities they might not otherwise have.

“Since art is visual, the fact that our kids don’t get to see museums very often, and don’t get exposed to the fine arts as in a major metropolitan area, is huge.”

With the board, though, Derrow can put on a museum tour and those boundaries disappear.

“It opens their eyes, and breaks down the barriers of geography and social strata.”

Derrow plans to continue improving his skills with the board, and intends to begin training students and increasing class interactivity. He notes that the technology has made him more enthusiastic and excited about the education process.

“This will keep me in teaching longer,” he says.