

Do teachers need to be taught?

Simulation in the Classroom and Beyond

Many students experience modeling and simulation every day—each time they pick up a Playstation, Xbox, or GameCube controller. But what does video gaming have to do with the classroom and learning? Lots, according to presenters from TechPath of the Florida High-Tech Corridor Council, a group aimed at high tech growth and developing the workforce to support our area's tech industry.

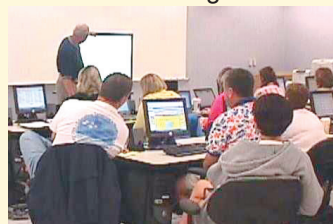
Students already love the technology. But it takes the help of teachers to prepare and guide them toward careers in modeling and simulation. To equip teachers with the knowledge they need, they went back to school themselves. They learned about the history of simulation. They experienced "Virtual Field Trips" and how to incorporate cost-free virtual travel into the classroom. Presenters covered simulation in the military, in theme park attractions, in virtual reality programs, in learning and training programs, and how simulation can be used to teach special populations. Educators experienced a gaming demonstration and discovered the importance of math for careers in simulation. Armed with all of this information, they left with ideas for incorporating activities in the classroom to promote learning and careers in technology. And some of them probably went home and picked up their kid's Xbox controller, determined to conquer the quest at last.

SMART Boards: The power of a computer with the simplicity of a whiteboard

Using a computer to learn is incredibly powerful, but confines the experience to a monitor and isolates students. Using color markers on a whiteboard allows the whole class to see, but is limited to handwritten notes. What if you could combine the power of a computer with the simplicity of a whiteboard? **You can!** It's called the SMART Board, and some area teachers have received new ones for their classrooms. Trainer Bob Mallory from Tampa's Audio Visual Innovations taught teachers how to use the technology and shared several resources, strategies, and activities to motivate learning.

Here's how it works. The touch-sensitive display—looking very much like a whiteboard—connects to a computer and projector. It displays whatever is on the computer, but it doesn't stop there. It's completely interactive! Teachers and students can control the computer directly from the SMART Board. A finger tap on the board acts like a mouse click on the computer screen. From the display, students can review a reading selection, and add notes about the plot and characters. They can research the web. They can solve a math problem for the class, and then save or print the problem *and the notes* as a study tool. They can take a virtual field trip together, reinforcing reading and adding digital notes about the experience.

Researchers are convinced that engaging students creates enthusiastic learners who retain more. Using the SMART Board, motivated students want to participate by touching and interacting, and unmotivated students can become motivated by the "wow factor" and the pure enjoyment of the technology. As SMART Boards become more prevalent, teachers from around the world are sharing lesson plans designed for interactive learning.



Bob Mallory from Audio Visual Innovations demonstrates the SMART Board to area teachers.

Teacher Workshops

Teachers Talk Tech at No Teacher Left Behind Workshops

Page by Leslie Rowe

Through a cooperative effort of the Adult, Career and Technical Education Department (ACT) of the School District of Manatee, and TechPath, the education consortium of the Florida High Tech Corridor, educators from Manatee and Sarasota Counties recently went back to school. Nearly 100 teachers attended the fourth annual **No Teacher Left Behind** series of workshops, held May 31 and June 1-2 at MCC's Center for Innovation and Technology. The event's goal was to update teachers' technology skills and equip them with today's digital tools. "Our theme is to increase interactive instruction, pulling students into the classroom, and motivating them with instant feedback on learning," said Doug Wagner, Director of ACT. "But first we have to equip teachers with the tools, skills, and knowledge they need to get there. To increase student achievement, it's critical that we invest in the teachers." Participants attended workshops on Modeling & Simulation; SMART Boards; Interactive Classrooms; Handheld Computers; and Strategies for a Rigorous & Relevant Education.

The New Three "R's"— Reading, Rigor, and Relevance

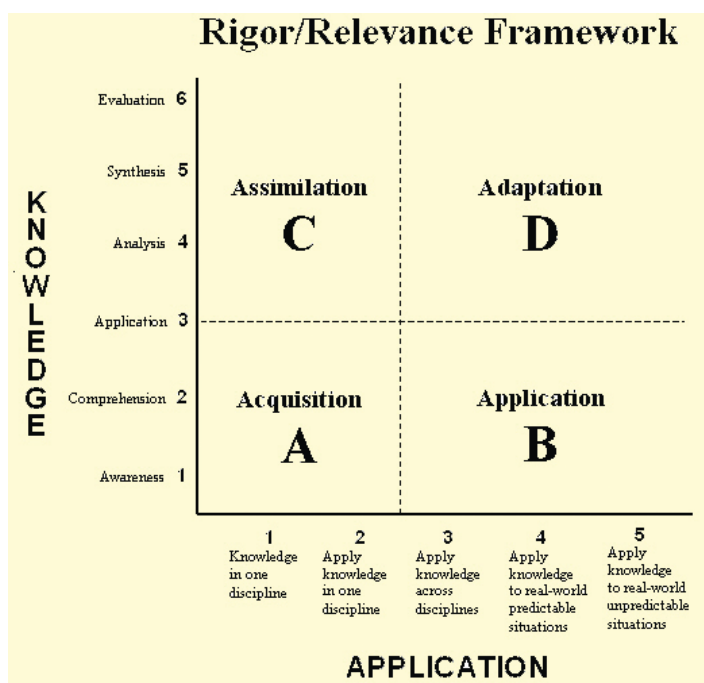
As part of the No Teacher Left Behind event, teachers heard from Doris Southern, a seasoned educator speaking on how to improve reading comprehension and measure learning, with the ultimate goal of raising student achievement. Southern introduced *Instructional Strategies: How to Teach Rigor and Relevance*, a resource from the Instructional Center for Leadership in Education (ICLE) founded by its president Dr. Willard R. Daggett.

In the workshop, Southern applied Dr. Daggett's **Rigor & Relevance Framework** (see chart below) to the context of creating assessments that measure higher levels of learning. The Framework evolved from Bloom's taxonomy, a system of categorizing and assessing learning. To get a better idea of the concept, consider these sample test questions and the vastly different levels of learning and application required to answer them:

1. Who fought in America's Revolutionary War?
2. Why did the Revolutionary War patriots object to taxation without representation? What kind of representation did they want?
3. Based on your knowledge of the Revolutionary War, what benefits can a democratic society hope to receive as a result of government taxation?

The answer to (1) requires knowledge of a fact. Number (2) requires a slightly higher knowledge and application of the facts. Number (3) requires assimilation of knowledge and adaptation of that knowledge to a real-world situation. Workshop participants were challenged to focus on teaching students to *adapt* knowledge and skills, coming up with solutions based on analysis, synthesis, and evaluation. Teachers practiced creating and adapting test questions that reached higher levels in the framework's quadrants.

Given the research supporting this application-based instruction as a way to improve achievement, teachers must carefully plan learning experiences that encourage and motivate higher levels of both understanding *and* application. In other words, if our students are to achieve in school, on the FCAT, and in the workforce, they've got to be able to think for themselves.



The Rigor/Relevance Framework guides learning to higher levels. Source: International Center for Leadership in Education at www.daggett.com

Interactive classroom kits

If you've ever yelled an answer at Alex Trebek on the Jeopardy! game show, you'll love this new technology arriving at some of Manatee's classrooms. Teachers learned how to use Interactive Classroom Kits, another outstanding tool to grab and hold students' attention and cement the learning with immediate reinforcement. This electronic teaching system uses hand-held wireless keypads (picture a TV remote), a receiver, and special software called RxShow that adds interactivity to Microsoft PowerPoint. Projecting the PowerPoint presentation onto a screen, teachers use the tools to generate discussion, review materials, and test students' comprehension. Students click responses to test questions, opinion polls, or reviews, and classroom results are instantly displayed graphically. Teachers can immediately tell who understood, who didn't, and what percentage needs improvement. Reluctant students are on equal footing with eager students, and all are actively engaged and empowered using a gadget that feels familiar. To add fun, teachers can create Jeopardy-like learning games involving teams or individuals, which students enjoy.

"It's not just the handheld device," said Harold Horowitz, Ph.D., the instructor demonstrating classroom applications for the Interactive Classroom Kits. "It engages a whole new generation of kids who can touch, see, and receive an immediate response. It's a new dynamic and opens up a whole new atmosphere of learning. If one student thinks he does not understand—and he thinks he's the only one—he will shut down. But if he sees three or four aren't getting it, he knows he's not alone. And so does the teacher. And now the responsibility lies with the teacher to fix it." "This motivates kids to tune in and pay attention," said Bonnie Condor, a Bayshore Business Academy teacher. "And a teacher sees the percentage of correct responses and immediately knows what needs to be re-taught."



Bonnie Condor, Bayshore High business teacher, Carolyn Gilbert, Palmetto High agriculture teacher, and Julie Tillett, Palmetto High ESE job coach learn how to program the interactive classroom keypads.

Handheld Computers

Think about the possibilities of a computer that sits in the palm of a student's hand for about the cost of a pair of good tennis shoes. Today's handhelds are compact, affordable; and more powerful than ever. "This Axim has all the power of a PC from five years ago—on one handheld," said Mike Curtis, one of the presenters at the No Teacher Left Behind event. His comment sums up why more and more educators across the country are providing hand-held computers for classrooms.

New applications and creative strategies designed specifically for education are hitting the tech market. Sketchy, an animation program for the Palm, allows students to create animations that demonstrate what they've learned. PiCoMap allows students to create, share, and explore concept maps—sophisticated outlines. Math programs simulate flash cards. E-books can be instantly downloaded. Students can wirelessly beam homework to the teacher or take tests. Readers with a special scanning pen can scan confusing words, creating an instant vocabulary list, and then look it up in a built-in dictionary. Teachers can teach a curriculum in English, beaming a Spanish version to students speaking English as a second language. Teachers can automatically update grades and student records from home or classroom by synchronizing information through a cradle or cord. Add in wireless access to the Internet, with all the research and information available online, and you've got an amazing tool that can be applied to any subject area.

"This is huge," said Elaine Waldron, a language arts and business teacher at Johnson Middle School. "I'm picturing different teachers and how many ways they could use this! Students can write papers and beam them to me. They can collaborate and beam information to each other—what an impact on writing skills. I can assign different reading assignments to different students, and beam them individually. I wish I'd known about this last year!"

At the No Teacher Left Behind event, participants could choose to attend workshops and receive either Palm Zire or Dell Axim handheld computers. Dr. Larry Chew from the University of Central Florida conducted the Palm workshop, while Sunsim Munshi and Mike Curtis of GoKnow provided the Dell Axim training.



Dan Bryan-Beachler, Lakewood Ranch High agriculture teacher, learning to use a new handheld computer

InquiziKidz page is published every Wednesday in The Herald.

Provided by Newspaper in Education, Kristin Lamphron, Education Manager (941) 748-0411 ext. 5031
Darren Falterman, Digital Media Specialist © Knight-Ridder Productions, inc.

Ballard Elementary Magnet
Daughtrey Preparatory Magnet
Harlee Middle Magnet
Johnson Middle Magnet
Lee Middle Magnet



Lincoln Middle Magnet
Manatee Elementary Magnet
Rowlett Elementary Magnet
Tillman Elementary Magnet
Wakeland Elementary Magnet



www.daggett.com
www.field-trips.org
www.edcompass.smarttech.com
www.socratec.com
www.learninginhand.com