



## Views You Can Use

Vol. VIII No. 6

January 2009

Although financial resources are shrinking, the expectations for improved student performance are higher than ever. To keep up with today's economic challenges, schools must adapt. Managing this process requires leadership at all levels.

The International Center is collecting and analyzing tools, strategies, and practices from the nation's most rapidly improving schools and plotting them on the **Efficiency and Effectiveness Framework\***. We will showcase the schools with the most successful best practices at the 17<sup>th</sup> Annual Model Schools Conference on June 28 –July 2 in Atlanta. Register by March 1 to receive a 10% discount. To register or for more information, please visit [www.modelschoolsconference.com](http://www.modelschoolsconference.com).

Sincerely,  
Bill Daggett

\* The Efficiency and Effectiveness Framework (E/E Framework) was developed to help guide school and district decision making. The E/E Framework compares the efficiency (cost) and effectiveness (student performance) of a wide variety of tools, strategies, professional development programs, organizational configurations, and procedural decisions that schools make. Learn more about the E/E Framework in our newest free white paper:

[www.leadered.com/pdf/Improve%20Perf%20with%20declining%20resources.pdf](http://www.leadered.com/pdf/Improve%20Perf%20with%20declining%20resources.pdf) or visit <http://www.leadered.com/MaximizingResources.html> to read more and submit best practices.

## Education Trends

### Addressing Lack of ESL Teacher Training

Faced with a burgeoning number of students who speak little or no English and teachers who have little or no experience teaching English as a second language (ESL), states and districts have begun to create their own ESL training programs. The Massachusetts English Language Teachers Initiative, for example, was conceived after results of the first statewide English language proficiency test in 2005 showed that in some districts less than 50% of students had made progress in learning English. Under the Massachusetts program, now in its third year, certified teachers in any subject can take a one-year course to become a licensed ESL teacher.

Other programs include one at Clifton Public Schools in New Jersey that offers two- or three-day ESL training, followed by a year of mentoring support and ongoing professional development. In North Carolina's Charlotte-Mecklenburg school district, whose students represent 125 different languages, teachers can take courses on Saturdays that lead toward ESL certification. (See "By the Numbers" for more statistics.)

Source: [www.edweek.org/ew/articles/2009/01/08/17training.h28.html?print=1](http://www.edweek.org/ew/articles/2009/01/08/17training.h28.html?print=1)

## **Turning to Parents for Support**

During these tough economic times, schools around the country are relying more on parents and nonprofits to help secure needed funds and resources, from textbooks to teacher salaries. In Columbia, S.C., for instance, a parent group purchased 100 dictionaries for a middle school teacher who had requested them, and a parent-teacher association (PTA) in Middletown, Ky., had discussed ways to pay the salary of teacher aide whose job was in jeopardy. Last spring, smaller class sizes were preserved in two school districts in South County, Calif., with the help of parent donations. Also, schools have been requesting classroom and instructional items that are usually publicly funded, such as books and computer equipment, from PTAs and similar organizations, which traditionally have supported field trips and other non-core student enrichment programs.

Parent determination will help get schools through the economic downturn, just as it has in the past, said Mary Perry, deputy director for Mountain View-based EdSource, an independent education policy analyst. "In the long term, parents and concerned citizens must voice their expectations at the state level on how to stretch the dollars we have and work as effectively as we can."

Sources:

[www.oregister.com/articles/school-foundation-money-2243608-schools-help](http://www.oregister.com/articles/school-foundation-money-2243608-schools-help)  
<http://online.wsj.com/article/SB123059503016140943.html>

## **Nanotechnology Trends**

### **Potential Nanotechnology Hazards**

Nanotechnology has been heralded for improving everything from sunscreen lotion to iPods and continues to pump out promising new materials and applications. However, researchers are beginning to find that nanotechnology has its flaws when it comes to potential health and environmental hazards. "Buckyballs" (round hollow carbon molecules) and carbon nanotubes, for example, have been shown to cause brain damage in fish, and inhaling carbon nanotubes results in lung damage similar to that caused by asbestos.

A research team from the University of Calgary in Alberta, Canada, has conducted some of the latest research on buckyballs, which already are being made on a commercial scale for use in coatings and materials, but their toxicity is unknown. Because it is difficult to perform cellular-level experiments with buckyballs, the team ran high-powered computing simulations of cell behavior. The simulations show how buckyballs are able to dissolve in cell membranes, pass into cells, and re-form particles on the other side, where they can cause damage to cells.

Sources:

<http://eetimes.com/news/semi/showArticle.jhtml?articleID=208400606>  
[www.ucalgary.ca/news/may2008/buckyballs](http://www.ucalgary.ca/news/may2008/buckyballs)

## **More Efficient Solar Cells**

Researchers at New Jersey Institute of Technology have developed an inexpensive solar cell that can be painted or printed on flexible plastic sheets. The solar cell was developed by combining carbon nanotubes with buckyballs to form snake-like structures. Nanotubes can conduct current better than any conventional electrical wire. On the other hand, buckyballs trap electrons, although they can't make electrons flow. So when sunlight shines on the composite material, the buckyballs "grab" the electrons from the light, and the nanotubes are then able to make the electrons flow into an electric current.

The researchers say that when the material is fully developed, people will be able to print sheets of these solar cells with inexpensive home-based inkjet printers. "Consumers can then slap the finished product on a wall, roof, or billboard to create their own power stations," said lead researcher Somenath Mitra.

[www.whatsnextnetwork.com/technology/index.php/2007/07/23/p5516#more5516](http://www.whatsnextnetwork.com/technology/index.php/2007/07/23/p5516#more5516)

## **New Microscope for Better Nanotechnology Research**

As researchers and engineers continue to create materials and applications on an ever-smaller scale, they need more powerful technology so they can better see the nanoparticles they are working with. The latest tool that allows scientists to do just that is the orthogonal microscope, developed by scientists at the National Institute of Standards and Technology.

The new microscope allows researchers to track the motions of nanoparticles in solution in three dimensions. Up until now, researchers looking through a microscope could only see a three-dimensional fluid volume only as a two-dimensional plane. As a result, there's no real sense of the "up and down" movement of particles in its field of view except that they get more or less fuzzy as they move across the plane where the instrument is in focus. To date, attempts to provide a three-dimensional view of the movements of nanoparticles in solution largely have relied on that fuzziness. The researchers hope the technology will lead to a better understanding of the dynamics of nanoparticles in fluids and, ultimately, process new control techniques to optimize the assembly of nanotech devices.

Source:

[www.medinews.co.uk/HealthTechnology/Orthogonal\\_Microscope\\_for\\_3D\\_Tracking\\_of\\_Nanoparticles](http://www.medinews.co.uk/HealthTechnology/Orthogonal_Microscope_for_3D_Tracking_of_Nanoparticles)

## **Economic Trends**

### **No Limit on Vacation Time — Just Don't Forget the BlackBerry!**

A growing number of mostly high-tech companies are doing away with a set number of vacation days for professional-level employees. The pros: Employees have more flexibility and are allowed to work remotely for at least part of their work schedules. For companies, workers can't accrue unused time and receive payouts when they leave. The cons: Unlimited time out of the office may mean no vacation at all because employees may feel pressured to work constantly, according to Take Back Your Time (TBYT), a nonprofit consortium of churches, universities, and businesses in the United States and Canada focused on work/life balance. A recession can

compound the problem; when people feel insecure about their jobs, they are less likely to take time off, according to TBYT board member Bonnie Michaels.

Source: [www.boston.com/jobs/news/articles/2008/07/20/is\\_unlimited\\_vacation\\_a\\_good\\_thing](http://www.boston.com/jobs/news/articles/2008/07/20/is_unlimited_vacation_a_good_thing)

## **By the Numbers**

Following are some statistics relating to the teachers of English as a Second Language and ELL student enrollment (See “Education Trends” for the full story).

- *No Child Left Behind* has no provisions that require teachers of ELL students to be certified in ESL. Moreover, educators who teach students in classes in which the main purpose is to make them functional in English do not have to meet the “highly qualified” requirements under the federal law.
- Only three states — Arizona, Florida, and New York — have laws requiring that all teachers receive training in working with ELL students.
- Large urban schools particularly are faced with the issue of how to educate increasing numbers of ELL students. In North Carolina’s Charlotte-Mecklenburg district with 134,000 students, for example, 75% of new students enrolled in the district each year are from Hispanic homes and speak almost no English.
- A California survey conducted in September found that between 2003-07 more than 11,000 instructors with little or no background in ESL were assigned to teach ESL instruction.

Source: [www.edweek.org/ew/articles/2009/01/08/17training.h28.html?print=1](http://www.edweek.org/ew/articles/2009/01/08/17training.h28.html?print=1)