



By Anita McAnear

# Innovation and Change

Welcome to Volume 32 of *Learning & Leading with Technology*! I hope your school year is off to a great start and that you will find lots of valuable ideas and resources in the pages of *L&L* this volume to help you use technology to improve teaching, learning, and administration.

Last spring I had the privilege to participate as one of the judges for the Sylvia Charp Award for District Innovation in Technology sponsored by *T.H.E. Journal* and ISTE. Sylvia served as editor-in-chief of *T.H.E. Journal* from 1974 until her death as a result of a car accident in late August 2003. She was a one-of-a-kind pioneer who made numerous contributions to the educational technology community.

While examining the award applications, I took the opportunity to reflect on Sylvia's life and contributions and read about some incredible things school districts are doing across the United States. I found myself wondering what Sylvia would think of the school districts that had applied for the award. I could just hear her ques-

tions. Do they have good evidence this is working? Are they showing us that this works? Are they really using technology to its potential? Are they using technology to develop higher-order thinking skills and solve problems?

Happily, we had a winner whose application had good answers to these questions—the Irving Independent School District in Irving, Texas. More than 60% of this district's students are economically disadvantaged, yet it has achieved the second highest level on the state's accountability rating system. The district has implemented EdSoft, a Web-based software tool that allows teachers to analyze their own test data and conduct assessments to meet requirements of No Child Left Behind. The district meets and indeed often exceeds the NETS essential conditions. The community has committed to providing laptops to all 8,000 high school students, and they are moving toward a one-to-one environment for all third through eighth graders as well. The list of innovations within their programs is extensive and includes

a laptop program, extensive use of Blackboard by teachers in support of their face-to-face instruction, use of videoconferencing and software tools, technology/media fairs, and robotics contests. Yes, I am sure Sylvia would be proud of the winner of her award.

This award highlights the innovation that is going on in U.S. schools. Now our challenge is to scale up these models so that all students achieve their potential. A key challenge remains: getting computing power into the hands of all students in schools. Many students have access at home and are taking advantage of that access for learning. In this issue, Glen Bull and Joe Garofalo take on that challenge and call for solutions to the "last mile" of getting Internet access to all students 24/7 (p. 16).

Ubiquitous access comes with greater responsibilities. Mike Ribble, Gerald Bailey, and Tweed Ross discuss digital citizenship and identify appropriate technology behaviors (p. 6). Other articles in the issue cover leadership through volunteerism, curriculum ideas, staff development, fighting spam, implementing PBL, and ideas for your school's library Web site. Who knows? Maybe next year I'll be reviewing these projects as applicants for the 2005 Sylvia Charp Award (<http://www.iste.org/membership/awards/>).

Anita



## Readers Respond

Letters continued from p. 5

I am impressed by the use of technology in Levin's program. The public forums that students moderate are an incredible way for students to take ownership and lead their own learning about current events, in addition to learning to communicate thoughts and opinions in an observed forum.

I am further impressed by his deep understanding of using the tools at hand, as indicated by the students' ability to work on projects collaboratively through the use of networked folders accessed wirelessly.

Levin's Urban School laptop program is a guiding light to other schools who want to fully utilize the benefits of ubiquitous computing.

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### Rethinking Computer Science

I applaud Allen Tucker for his article on "A New K–12 Computer Science Curriculum" (April 2004, pp. 16–20). It is never too late to consider his suggestions and seriously reexamine our K–12 curriculum. When we moved away from "teaching computer programming skills" to "computer literacy" in the mid-1980s, some of us did not agree with that concept, but the numbers were too few to make a difference. In fact, some of my presentations from 1990 included a statement: "We are making a big mistake; we are going to lose our jobs in the computer world just as we lost the jobs in the auto market." As many of us do not agree on outsourc-

ing, I would like to challenge each one of you with a question: What did you do 10 years ago when we stopped teaching "thinking with computers"?

On my return from India after visiting two secondary schools in Madras in 1995, I carried their matriculation and higher secondary syllabus, which focused on computer science as a separate subject, and questioned my fellow educators about the need for computer science concepts to be taught from kindergarten. My arguments were as follows:

1. Computer science is not introduced to U.S. students as a separate subject beginning in kindergarten. And computer programming is only offered as an elective in high school, one which very few students select. What should we do to introduce programming concepts from elementary grades? What can we do to make learning computer programming fun-filled?
2. In an effort to meet the state and national standards, all schools are working hard to make sure that adequate numbers of students pass the test. Even though some school divisions are making sure that students acquire technology skills by eighth grade, how many of our states have really integrated programming concepts as a requirement?
3. We teach Base 10 from the beginning, and rarely do we mention Base 2 to students. Do many of our students in middle schools know the vocabulary word *binary number*? A second grader in Madras does! So, when we speak

about a competitive global economy, let us also examine the level of preparation of our students.

4. What should we do to motivate children to desire to learn more? In 1995, Indian educators saw a change coming, modified the curriculum, and motivated the kids to take computer programming as a separate course in the computer lab in the schools. Jobs are scarce in India, and so parents spent extra money to get the kids to computer programming classes. My auto driver worked extra hours every day because he needed an additional two weeks' salary to send his daughter to after-school computer programming courses. There is a desire and need to learn in developing countries. We in the United States provide everything free. Our kids, in their need to pay toward gasoline and car insurance in high school, end up going to work rather than taking extra computer science courses! How do we change this "culture of plenty" to think about global competitiveness?

I hope ISTE will work toward revisiting the NETS•S based on this article. I hope you will join me in motivating our schools to think about integrating computer science in math, science, and language arts.

Please visit [http://ncert.nic.in/ncert\\_it\\_curri\\_home.htm](http://ncert.nic.in/ncert_it_curri_home.htm) and refer to IT competencies by year 10.

*Mano Talaiver*

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