



Yes

In this rapidly changing world of technology in which our students are growing up, it is important for schools to strive to provide leading edge technology experiences in their education.

Each year, K–12 students arrive on the first day of school with increasingly honed technology skills, in-depth knowledge, and “digital speak” assimilated from the mere fact that they are living in a digital environment. They are functioning in a world that is increasingly wireless, full of multimedia, (text, photos, audio, and video) constantly accessible to information, and able to afford the latest technology. They



By Kimberley Ketterer

... speak a different language... mp3, digital camera, WI-FI, flash drive, IM, Google, cell-phone, smartphone, Bluetooth, handheld computers, ebooks, blogs, moodles, just to mention some of the current digital jargon!

Our students of today will be expected to have the basic skills in the areas of multitasking, col-

No

Using the latest and most expensive computer equipment in the schools is not the best use of staff time, student time, or financial resources.

Our infatuation with having the newest computers is harmful to the educational mission. Buying a few state-of-the-art computers is expensive, ties us into a painful upgrade cycle, wastes staff time, lowers the computer-to-student ratio, and with a few exceptions is unnecessary and sometimes harmful.

Because it is new we think it is better. And if it is better we will obviously provide it for the schools regardless of the cost (just kidding). New computers cost lots of money, and schools are in a perpetual budget crisis.



By Rich Gibson

The “new computers now” camp says the answer to computer problems is to get a new computer or new software. Vista is the oft-delayed new operating system from Microsoft. A Vista-ready computer will require an extreme upgrade in hardware. And what will that get us? Word

laboration, researching, synthesizing, and presenting. They will be expected to complete their work from a variety of locations and across many different time zones. With the reality of laptops, handheld computers, and cell phones now at a price where they are in homes and schools, the wireless environment is huge. Entire downtown cities, specific restaurants, coffee shops, airports, and other public places around the world provide wireless connections.

This has a huge effect on school and district policies as well as on the way learning and teaching is conducted in the classroom. With online data warehouses becoming a necessity in this data-driven nation, students are participating in online testing, with immediate results available for teachers to help in the differentiation of instruction.

Imagine asking students to research a historical topic but limiting them to the books in the school library, including giving them the parameters of a word-processed report (or worse yet, handwritten) and including one photocopied image! In reality, students in schools with modern (not even leading edge) technology, given the same historical research assignment, can glean information from libraries around the world, view archived images of historical documents, hear famous speeches in the orators' own voices, research period music, and then synthesize the information and present it in a multimedia presentation. The presentation can then be uploaded to the Internet to be shared with their parents, and even relatives who live in other cities.

This is where technology is at *now!* And it will continue to rapidly change

as our students' progress through their compensatory educational experience. It is therefore an imperative that, as a society, we support our schools by providing resources, accompanied with professional development, to ensure that students and teachers are kept current as they rapidly progress in integrating technology into the teaching and learning environment.

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processors will not run noticeably faster. We will not notice an improvement in our spreadsheets. The computers in science labs will continue to sample temperature and pressure, velocity and elapsed time just about as they do today. And the new version of Internet Explorer is mainly modeled on what the Firefox browser can do for us today.

How long can schools (not to mention the rest of us!) remain happy in our hamster wheel of progress? Can society continue to subsidize the bloat and quarterly revenue projections of our technology industry?

The problem with new computers extends beyond cost. Each new release of software requires time to upgrade systems and time for teachers to get up to speed on each new version of software.

Years ago, science fiction author and longtime *Byte* magazine contributor

Jerry Pournelle formulated the rule of one CPU per user. As technology advanced and costs came down, Pournelle amended his rule to *at least* one CPU per user. With that in mind, do we really want to force kids to share a limited number of really good computers?

Putting a limited number of state-of-the-art, high-priced computers in classrooms creates a high student-to-computer ratio, and students often are not allowed to really use those elite machines. The equipment is so expensive that labs and classrooms must be carefully monitored, and students must be prohibited from doing things that might damage the equipment.

Using low-cost or older machines allows you to create lower-cost networks students can truly learn to use. It also allows you to create computer labs that are something less than the Fort Knox of the school.

There are exceptions to this principle. Classes doing yearbook and digital video editing need as much processing power as we can afford. The extra power makes a real difference to those uses. And you shouldn't use a computer so old that it requires massive amounts of staff time to keep it running.

Do we want books and computers for everyone or a limited number of new computers locked on a pedestal?

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