



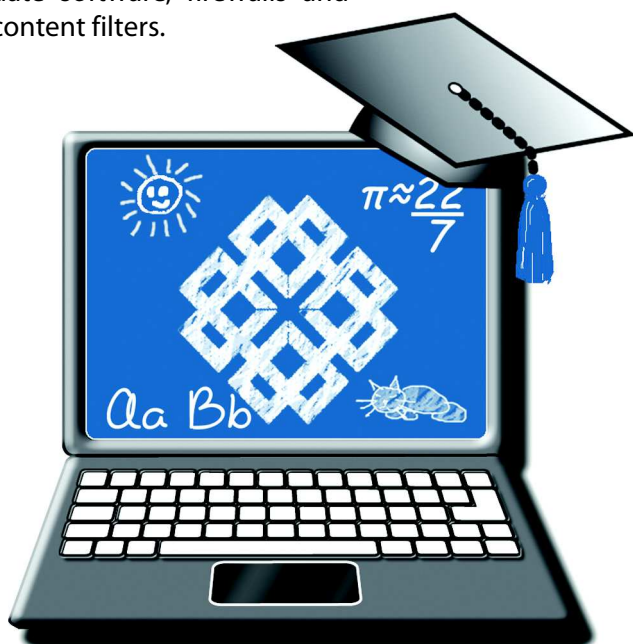
It's that time of year again

Dreams of Digital Education

Advertisers are already busily promoting back-to-school sales and schools are gearing up for a new year. With all the fancy high-tech gadgets out there, it seems that education should be all digital by now. But **reports** show that the bright, shiny future is not coming along as fast nor as easily as one might hope. The promise of learning aided by digital technology is still out of reach for most Americans. Many schools haven't made computers and the Internet an essential part of every students' day and every teachers' lesson plans for the simple reason that their technology is outdated and upgrades are expensive.

The tech revolution in education has slowed down across the country. The **White House** says that fewer than 20% of teachers feel their school's Internet connection meets their needs, and according to the **FCC**, half the schools and libraries applying for federal subsidies have lower connectivity than the average home, despite having 200 more users on average.

There's not enough bandwidth for school or the district office, the internal networking may be slow or buggy, old wiring and hardware may pose problems, and finally there may be badly-configured or out-of-date software, firewalls and content filters.



These things aren't cheap. Schools everywhere regard technological upgrades and maintenance as one area where administrations can cut back. It's not limited to bureaucrats, either. Parents need relief from pressure to keep up too. Though detachable keyboards are making **tablets** more useful, a sturdy **laptop** is still a better deal. Make sure, however, that access and all accounts are **password-protected**.

More than *two-thirds* of all school districts are cutting back on maintenance and replacement of equipment due to budget troubles, according to a **survey** last spring of some 600 district technology chiefs.

Money is the main reason educational technology lags, but not the only one. Skepticism of teachers and administrators doesn't help, especially when fueled by the disappointing results of promising online initiatives. For instance, **MOOCs**, "Massive Open Online Courses"; those televised lessons made popular by places such as **Khan Academy**, had huge initial sign-ups but also massive numbers of drop-outs, and they also tend to score poorly in the measurement that matters most, that of students actually learning.

Teens and machines

There may not be enough IT staff to properly service all the machines. **Hoboken**, New Jersey, provides a good example. Their program to give every middle- and high-school child a laptop was soon abandoned because it completely overwhelmed their repair staff. The machines themselves were often dropped, banged-up, sat on or otherwise broken, or infected with viruses, and theft was a major ongoing problem. The schools had Net Nanny installed to block porn, gambling sites, and Facebook. The webcams were all disabled and software was even embedded to prevent students from undoing the controls. Yet enterprising adolescent hackers easily found websites with instructions on how to access everything.

Meanwhile, security software was slow and cumbersome. Teachers complained that the small laptops took a long time to load only to crash immediately or had too little free memory left over to be useful.

Much the same thing happened with similar state-funded programs in Michigan, Pennsylvania, and South Dakota, compounded by politics and tight

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budgets. Texas showed mixed results, and about the only state to claim any success is **Maine**. The program there has been going on for over a decade, and teachers – especially in impoverished rural areas – praise the program as a revolution in education. Yet evidence of improved performance remains scarce.

The general situation may actually be getting worse. Overall, the average number of students to computers was *12 to 1* last year, up from *4 to 1* in 2010, while a 2008 survey found it to be *3 to 1*, and that *6%* of all schools had computers people could take home. *40 million students*, it is **claimed**, are being left behind.

More than half the districts say their schools don't have enough bandwidth to support all those devices being used online at once. So the Obama administration's new **ConnectEd** initiative will spend *\$2 billion* on various upgrade programs, matched by an equal amount from major corporations.

Recommendations for schools are to have *100Kbps for each student and staff member* by the end of 2013. More will soon be needed, because by Spring 2015, districts that have adopted the **Common Core** educational program will be administering online tests to millions of students. Only *18%* are ready now, and *11%* have no resources on hand to even begin.

New Mexico's digital report card

The Land of Enchantment has many things going for it, but economically it often lags behind most other states. New Mexico has always been an isolated outpost of empire, and so it seems likely that we might find ourselves near the bottom of any list.

In terms of digital technology and education, the state does better than one might think. **Digital Learning Now**, a national initiative to advance state policies to create high-quality digital environments, gives **NM** a **C-** or 72% score. While this grade would thrill few parents who would envy the highest **A-s** earned only by Utah and Florida, it's still much better than the **Fs** given to high-tech states California, Massachusetts, Illinois, and ten others.

The reason is that in 2007, New Mexico established an initiative supporting digital education throughout the course of an individual's entire school career from pre-school to formal workplace training. Called "Innovative Digital Education and Learning", or **IDEAL-NM**, it is a virtual statewide school with open enrollment whose credits are accepted in all state school districts, charter schools, and so on.

Don't get carried away by the promises of the future before they can be delivered and throw away those which work. In other words, keep your laptop secure and your pencils sharp.

Dangerous WiFi Hotspot Update

Mark Costlow, president

Last month we told you about a problem with open public WiFi hotspots, such as "**attwifi**" and "**xfinity-wifi**". The danger is that after you have connected one time, your phone, computer, or tablet is likely to *automatically* reconnect to any wireless signal with that name, even if it is fake.

As an experiment, we set up a WiFi hotspot in our office with the name "**attwifi**". We passed all connections onto the Internet. We verified that we could indeed snoop on, save, and even alter all of their connections if we had wanted to (though we did not).

We ran the experiment for a week with a low-power antenna inside our office. By the end, **26 different devices** connected and used the hotspot. They were roughly half iPhone/iPad and half Android. *None* of the device owners we spoke to were aware that they had used it. In other words, they didn't see "**attwifi**" and pick it. Rather, their phone or tablet connected automatically *without their knowledge or choice*. In some cases they were *not even using* the device – it was just automatically connecting to various email, cloud, and social networking services for updates.

Some "victims" were our own employees, but the majority were random visitors, people walking by or working in nearby offices. The software is freely available and can be set up and used by anyone with a moderate amount of computer administration experience. It's clear that this is a *real* danger.

Again, the safest (but hardest) solution is to **disable WiFi** on your device when you are not at a known-safe location. Here is a more balanced approach:

1. Tell your device *not* to connect to new networks without notifying you.
2. Tell your device to "**forget**" *all* the networks it knows now.
3. *Re-enter* the information for the "good" networks you use as they come up.
4. **Do not**, no matter how tempting, use *any* public WiFi hotspots. If you must (and sometimes you just gotta do it), repeat steps 2 and 3 afterwards.



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505-243-SWCP (7927) • SWCP.com • Help@swcp.com

5021 Indian School NE, Suite 600, Albuquerque, NM 87110

Portal editor/chief writer, Jay Nelson jnelson@swcp.com