A Brief Background

Having spent the first 7 years of my professional life working in the private sector, I became accustomed to working in an environment that offered state of the art electronic equipment. On my very first day of my first post college job I was given an IBM 286 AT computer to use which, at the time, was the envy of the industry. In this job, I worked as a store support and applications supervisor for Safeway Stores Inc. Our department was responsible for the “roll” out of new automated programs. Our largest endeavor was converting some 200 grocery stores from manual electronic check out systems to automated bar code reading scan systems. This was in the mid 80’s and it seemed like every few months a smaller yet faster system would emerge. In a matter of two years, refrigerator sized NSC 1700 controllers with LP record sized hard drives that held 5mb were being replaced with IBM 4680 P.C based systems with three times the speed and literally 20 times the secondary storage space.

A Rude Awakening

When I entered into education in 1993 it seemed as if I had been place in a time capsule and sent back somewhere between 5 and ten years. A goal of mine was to teach business ed. courses at the high school or middle school level with an emphasis in teaching computer applications. I wasn’t aware of how behind times computer labs and classrooms really were. My first teaching job was at Louis Pasteur Middle School in the San Juan Unified School District located in suburban Sacramento County. My assignment was to teach “computers” (whatever that means) and teach a couple of algebra classes. Mathematics supplement on my teaching credential played a major role in getting my foot in the door. When my new principal escorted me to my new “DOS” lab, my chin nearly hit the floor. I was staring at a classroom of relatively ancient Clones from the XT era (about 1982) half of which didn’t even have a hard drive. How was I supposed to teach on these things? I quickly found out that no other teacher on that campus had any knowledge or background in PC clones or MS DOS. The culmination of the staff’s computer experience was limited to Apple computer’s equipment and was mostly limited to a single computer in the classroom, which was primarily used for the teacher’s administrative needs (grades).

Luckily for me (and the school I guess) I had a pretty extensive background in DOS and I was able to piece a curriculum together that included keyboarding, spreadsheets, database, and educational game activities.

A Short Term Plan

After struggling through that first year of computer applications I sought to make some very quick changes. I, at least, wanted to get these students into the 1990’s. First, it became painfully obvious that I need to enhance the computer lab by upgrading the machines. I only
had one small problem... NO MONEY! After racking my brain, I recalled some of our practices at Safeway and remembered how we would donate used equipment to non-profit organizations. I began soliciting donations from local business and it didn’t take long to create a computer lab that had equipment that was only 1 or two generations old. With Microprocessors technology doubling every 6 to 12 months, I didn’t see this as much of a disadvantage.

A Plan for the Future

I have spent a lot of time talking about the way things were and the way things are. All of this has been based on my own experiences and observations. I have done this to merely present a perspective on the way I think things ought to be. We can begin by doing things differently. I’m not going to sit here and discuss a multitude of ideas that are what I feel to be unrealistic and borderline on the impossible. Sure it would be great to have class sizes of 12 students with a lap top hooked up to the internet on every desk, but unfortunately, I do not think that the public is ready to place that kind of dollar commitment on educational resources. Failing school bonds on many local ballets have proven that taxpayers are not willing to dig further into their pockets or allocate funds toward education.

School districts need to adequately prepare students for the new millenium by doing things differently:

• Working more closely with the community and business will be instrumental in assisting schools to accomplish the task of modernizing and guiding students effectively. **This will serve as a tremendous source of funds for developing new institutional and instructional programs.** Business depends on schools for providing a pool of prospective employees to assist them in offering competitive products and services. I have found that most businesses are quite willing to offer equipment and other valuable resources to schools. Developing business academies that create a cooperative climate between business and schools will also help to develop meaningful relationships between school, the community and business.

• **Class size reduction** can decrease student to teacher ratios, which will definitely improve the quality of education and instruction in the classroom. Current ratios of 35:1 need to be decreased to 25:1 in all classrooms. Creating a more intimate bond between student and teachers will help foster an environment where students can get more individual attention and become better learners.

• **Training teachers in new technologies** must be stepped up in order for effective teaching to happen in the new millennium. One of the biggest anchors in the development of the electronic classroom is the lack of knowledge and ability of current teachers. To pull this off, administrators need to motivate and offer incentives for teachers to become ready for the electronic classroom. Most “old school” teachers are so caught up in their archaic methods that they resist and criticize change. Unfortunately this resistance comes at the expense of the students. Exposing these reluctant educators to new technologies and
modern methods will help to enlighten them on the power of the Internet and project based learning.

- **Acquiring modern equipment and modernizing the antiquated infrastructure of our schools** needs to happen. Many of the schools in our district were built in the 1950s and 1960s. These facilities were built based on generally accepted principles and methods for that era. Things have changed! Internet cabling must be in each classroom. I believe a good student to computer ratio is a minimum of 3:1 however I would like to see an average of 2:1. Funding for this equipment can come through grants and from donations from the community and local business. Teachers need to take an active role in developing community and business awareness programs so leaders in those organizations can see the need to contribute. The complacent teacher, standing on the sidelines, waiting for equipment and refurbishing to fall from the sky will simply become a spectator rather than a pro-active participant.