

*Q&A with Todd Oppenheimer,
author of **THE FLICKERING MIND***

1. Should computers be banished from the classroom?

No, but their use should be far more limited and carefully controlled. In the younger years—Kindergarten through 2nd or 3rd grade—computers are necessary only rarely, mostly for students with learning disabilities. So most schools would gain far more than they'd lose by excluding computers entirely from the lower grades.

2. How should schools use computers so as to enhance education?

One of the best is in shop classes, where older students can take computers apart and learn how modern electronics and digital programming actually operate. Another strangely missed opportunity is to use computers to teach students how to compute. They are great tools (again with older students) for expanding understanding of sophisticated mathematical procedures such as scientific modeling. And obviously, the Internet offers valuable resources for research projects. The key is to use computers as a supplement in each of these areas, not as a replacement for traditional studies.

3. Why are computers failing to bridge the “digital divide” between the nation’s poor and wealthy schools?

Teachers in poor schools are often under-trained and overburdened. When computers arrive on this scene, the teachers typically see them as a savior, a device that will finally command their students’ attention. The reality is that the computer’s conveniences become a shortcut around the carefully layered intellectual work—with books and test tubes and pencil and paper—that are education’s fundamental building blocks. Even teachers who know this often can’t do much about it. Most of their time in computerized classes must go to managing technical hassles the schools can’t afford to fix, and watching for cheating, instant messaging tricks, and illicit material—to say nothing of the ongoing challenge of just maintaining order.

4. How does technology aggravate the inaccuracies of standardized testing?

Standardized testing is such an oversimplified science that even experts who support it suggest that its results be used only as a guide—not as the final scholastic judgment that is so in fashion today. Computerized assessments, educational technology’s latest invention, add yet another layer of numerical manipulation to this process, creating unintended consequences that are only beginning to be understood. Today, with the growing popularity of standardized testing, these problems are quickly multiplying as the states process more tests than the testing industry can keep up with.

5. At what point in a child’s learning experience should he or she be introduced to computer literacy?

The whole concept of “computer literacy” is overblown to begin with. It’s just not a big deal to learn how to use a computer. As one esteemed professor said, students can learn what they need to know for studies at MIT “in a summer.” Nonetheless, no student today should graduate from high school without some basic understanding of current software

programs and the principles of digital technology. Those studies should start by the 10th or 11th grade.

6. How necessary is computer training in preparing children for tomorrow's increasingly high-tech jobs?

There is no greater hoax in this story than the rush to put young children on computers, in the belief that it will prepare them for tomorrow's jobs. It won't—in fact, doing so may well put them at a professional disadvantage. One expert, who used to make educational software, suspects that employers of the future will actually steer away from applicants who were “computer trained.”

7. Are there any bright spots in the education landscape that we should emulate?

Absolutely. For the younger grades, the Waldorf schools (the subject of my final chapter) has figured out tangible, step-by-step methods for developing students' imagination, their sense of ethics and self-confidence, and their capacity for solving problems in an original way. In New York City, a small high school for hard-luck students called Urban Academy has created an unusual family atmosphere, which teaches students solid work habits and sophisticated approaches to the art of inquiry.

8. What are the “enlightened basics”?

These comprise three basic building blocks. The first is the foundation of thought. For young children, it starts with the fundamentals of play and creativity—not with simulated images but with real people and real things. (“The more muscle the more memory,” as one teacher told me). As students grow older, this block grows into what can be best described as the art of inquiry—the ability to investigate a complex question your own way, drawing on a broad base of knowledge. The second missing building block is a national collection of teachers who not only are well-trained, but are also sufficiently well-paid to attract the world's best and brightest—that is, people who can put good training to efficient, creative use. The third and final block would be an education culture that is first and foremost about people—and which trusts people, rather than numbers, to be the primary judge of a youngster's progress.

9. You say technology is opening schools up to industry corruption. What do you mean?

First, the basic Internet wiring projects are so poorly controlled, especially in poor schools, that technology companies have been able to inflate their prices—and get taxpayers to pay the bill. Software programs for instruction and assessment also can be quite complicated. That leaves educators dependent on the software manufacturer's advice on what gear to buy, what kind of academic work should be done with it, and what constitutes success. But the priority of these manufacturers isn't teaching. It's selling.

10. Are President Bush's education policies helping to correct matters?

President Bush has not pushed computers in schools as blindly as President Clinton and Vice President Gore did. But he has not made any significant cuts in this domain, which now seems to have become yet another permanently fat federal program. Bush's emphasis on school accountability also has increased pressure on testing, and all the distortions that computer technology brings to that world. And his requirement than any

new school initiative be proven worthwhile by “scientifically based research” has been an open invitation to charlatans in both industry and academia.

11. What questions should parents ask about how computers are used at their schools?

And what should they do if their schools aren't using them properly?

A tremendous amount can be revealed at a school through three simple lines of questioning:

The first questions to ask are, “How many computers does your school have? How often are they used and on what kinds of activities? The answers usually go like this: “We have five brand new computers in every classroom, and we use them all the time.” This is not what you want to hear.

Second, ask what cuts have been made in the school's curriculum in recent years. To find room and money for computing, many schools have cut programs in a range of old curricular mainstays—domains like physical education, shop classes, science laboratories, music and the arts. Many of these programs have been proven to do far more for students' intellectual development than computer work does.

Last, go observe some classes and see for yourself if the projects students do on computers are solid and deep, or dominated by superficial graphics. And make sure to meet the school's technology coordinator. Many are gullible consumers of anything digital that comes through the door. But many really know their stuff, and manage to keep the junk from getting on their school's machines.

If the answers to these questions are discouraging (and if you can't transfer to a school that has computing under more control) compensate at home. Keep your children away from computers and the television—and in conversation, playing outside, or making things with their own hands. Encourage them to take up a musical instrument, which can physically expand important areas of a child's brain. Get them into a science club, an art class, or sit down and paint with them yourself. For very young children, getting outside and playing make-believe with their peers is a crucial way to develop their imagination—a domain sorely neglected in school today. If your children are sedentary, get them on a sports team, which is one of the best ways to learn socialization skills.