

Amplification and Amputation

In their rush to place a computer on every desk, schools are ignoring developmental needs.

By Lowell Monke

A computer can inundate a child with mountains of information. However, all of this learning takes place the same way: through abstract symbols, decontextualized and cast on a two-dimensional screen. Contrast that with the way children come to know a tree – by peeling its bark, climbing its branches, sitting under its shade, jumping into its piled-up leaves.

There is a huge qualitative difference between learning **about** something, which requires only information, and learning **from** something, which requires that the learner enter into a rich and complex relationship with the subject at hand.

What “Information Age” values tempt us to forget is that all of the information gushing through our electronic networks is abstract, one or more symbolic steps removed from any concrete object or personal experience. Furthermore, making meaning of new experiences – and the ideas that grow out of them – requires quiet contemplation. By pumping information at children at phenomenal speed, the computer short-circuits that process.

This deluge of shapeless heaps of data caused the late social critic Marshall McLuhan to conclude that schools would have to become “recognized as civil defence against media fallout”. McLuhan understood that the consumption and manipulation of symbolic, abstract information is not an adequate substitute for concrete, first-hand involvement with objects, people, nature, and community, for it ignores the child’s primary educational need – to make meaning out of experience.

Computers have a propensity to promote certain qualities while sidelining others. McLuhan called this process amplification and amputation. He used the microphone as an example. The microphone can literally amplify one’s voice, but in doing so it reduces the speaker’s need to exercise his own lung power. Thus one’s inner capacities may atrophy.

This phenomenon is of particular concern with children, who are in the process of developing all kinds of inner capacities. Examples abound of technology’s circumventing the developmental process: the student who uses a spell-checker instead of learning to spell, the student who uses a calculator instead of learning to add – young people sacrificing internal growth for external power.

There are some grave consequences in pushing technological values too far and too soon. Soon after my high school computer lab was hooked up to the Internet, I realized that my students suddenly had more power to do more damage to more people than any teenagers in history.

Had they been carefully prepared to assume responsibility for that power through the arduous process of developing self discipline, ethical and moral strength, compassion, and connection with the community around them? Hardly. They and their teachers had been too busy putting that power to use.

We must help our young people develop the considerable moral and ethical strength needed to resist abusing the enormous power these machines give them. Those qualities take a great deal of time and effort to develop in a child, but they ought to be as much a prerequisite to using computers as is learning how to type.

Trying to teach a student to use the power of computer technology appropriately without those moral and ethical traits is like trying to grow a tree without roots. Rather than nurture those roots, we hand our smallest children machines and then gush about the power and control they display over that rarefied environment.

From the earliest years, we teach our children that if they have a problem, we have an external tool that will fix it. Computers are not the only tools; Ritalin, for example, is a powerful technology that has been scandalously over-prescribed to “fix” behaviour problems.

After years of this training, when our teenagers find themselves confused, angry, depressed, or overwhelmed, we wonder why so many of them don’t reach out to the community for help or dig deep within themselves to find the internal strength to persevere, but rather reach for the most powerful (and often deadly) tool they can find to “fix” their problems.

We live in a society saturated with material comforts but almost devoid of meaning. Schools that see their job as preparing young people to meet the demands of a technology-driven world merely embrace and advance the idea that human needs are no longer our highest priority, that we must adapt to meet the demands of our machines.

We may deliver our children into the world with tremendous technical power, but it is rarely with a well-developed sense of human purpose to guide its use.

The most daunting problems facing our society – drugs, violence, racism, poverty, the dissolution of family and community, and certainly war – are all matters of human purpose and meaning. Filling schools with computers will not help find the answers to why the wealthiest nation in history condemns a sixth of its children to poverty.

So it seems that we are faced with a remarkable irony: that in an age of increasing artificiality, children first need to sink their hands deeply into what is real; that in an age of light-speed communication, it is crucial that children take the time to develop their own inner voice; that in an age of incredibly powerful machines, we must first teach our children how to use the amazing powers that lie deep within themselves.

(Adapted with permission from “The Human Touch” in Education Next, Fall 2004. Dr. Monke is assistant professor of education at Wittenberg University.)