Caveat Emptor: Computers in the Classroom

Who doesn’t want computers in the classroom? The upside to integrating computers into the curriculum is so great that no one could seriously consider passing up the chance to use the latest educational technologies. Have you seen the latest tools? There are some really good deals out there!

If we sound a bit like car salesmen, then perhaps prospective customers should consider a more balanced perspective. Let’s consider a hypothetical school district that is committed to upgrading computers in all of its schools. Under the rubric of “catch them while they are young,” the elementary schools become the focus of the first wave of renewal.

The district technology coordinator has been reading up on computer-generated air pollution. She informs the elementary principals that the new computers should be run for 180 to 200 hours in a well-ventilated environment without children present to allow all emissions from the new equipment to clear the air.

Shortly after the elementary students descend upon the equipment, the school nurse reports a dramatic increase in students complaining of headaches, neck aches, backaches, and burning eyes. As she writes her weekly report, she recalls a recent professional development seminar where the speaker argued that as much attention should be paid to purchasing ergonomically correct furniture as to purchasing the technology.

As the students’ downtime mounts in all elementary buildings, the decision is made to take the issue to the administrative council. They recommend hiring an ergonomics specialist to immediately address the elementary school problem and develop a long-range plan for the middle and high schools for the later waves of equipment purchasing.

The dust is just about settled on this issue when the district is contacted by its insurance vendor, who gives them a “heads-up” about the potential dramatic increase in rates for insuring schools and school equipment. It seems that youngsters are very good about taking care of their cell phones and iPods. But they pay much less attention to the care and security of their computers, especially laptops.

Meanwhile, in the classrooms, the teachers are quickly realizing that there are variations in their students’ computer knowledge, expertise, and access. Because they lack computers in their homes, some students need technical help and often cannot complete any computer-based homework assignments. Those students who lack high-speed Internet connections also report problems in completing such assignments.

The students who are technologically savvy are complaining that using computers in school is “so boring” compared to what they have and can do in their homes. The sophistication of their gaming consoles far surpasses the equipment that the school has. At home, they can spend hours on their computers and are not confronted and frustrated by the numerous blockers and filters found on the school machines. Furthermore, at home, they can shift from

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school work to games to chat rooms whenever they feel like doing so!

The district technology coordinator is also calling attention to the fact that rapid changes in computer hardware and software are likely to make the “new” equipment obsolete before the teachers and technology staff can get them to work properly. Teachers have been complaining that the machines and programs are not working properly. Projected hardware and software upgrades are increasingly costly and burdensome. And in a few years, many of these machines will not work at all.

The teachers also notice two other behaviors that are proving to be most disconcerting. Within science and math activities, the heavy computer users are having difficulty interpolating and extrapolating from data sets. Based on the latest research in cognitive psychology, it appears that what is being called “multitasking” is in reality a rapid shift from one cognitive activity to another and that the cognitive processing may allow for retention of material but not the application of the material to novel settings or situations.

In the cafeteria, restrooms, and on the playground there seems to be an increase in racist and sexist remarks. When confronted about their behavior, the students indicate these are just continuations of the discussions they are having in the unmonitored chat rooms they visit on their home computers.

And, unbeknownst to the teachers, at this very time a meeting is taking place between the central office administration and the leadership of a local environmental group. It seems that the environmental group is in the process of seeking legal restitution for damages and the costs incurred in recovering the old computers from the town landfill. Furthermore, they are requesting that the school district develop a recycling and hazardous waste disposal policy for all equipment and materials.

At the following board meeting, as all of these issues are presented in the technology report, a board member sighs and says: “I grew up in a home where my parents always said ‘there is no such thing as free lunch.’ Boy, does that ever apply to our use of computers in the classroom!”

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