

7. Intellectually alert students like to wrestle with open-ended questions. Do enough computer programs legitimately stimulate and satisfy this appetite? Or does the dazzling range of subroutines the computer can handle mask routine with seeming novelty? Is this something to worry about or not?

8. What effect will computers have on learning disabilities? Will the dyslexic, dysgraphic, dyscalculic, or disorganized student be liberated or frustrated by a tool that requires linguistic precision, conceptual and symbolic thinking, accurate memory, and sometimes rapid eye-hand coordination?

9. How will the computer affect the education of gifted and talented students? Will it free them from restrictions imposed on them by time and place, or will it isolate them even more from their peers than they already are? Is the computer, with its capacity for putting people in touch with information from around the world, well matched to the gifted child's ability to make novel connections and patterns? Might the speed with which the computer works and responds reinforce the gifted child's natural impatience with slower human thinkers? How can schools help these children catch the benefits yet avoid the pitfalls?

Applications

10. Assuming that the computer serves as a means rather than an end in itself for most students, what skills ought to be taught? Should students learn how to program? How to use programs? Both? Why?

11. How many software programs that supposedly teach thinking are actually drill and practice in disguise? And when students do need drill and practice, is the computer the best instrument? Will the novelty wear off, or is the computer's capacity for instant results and seemingly unlimited patience ideally suited to the learner who needs reinforcement? Can the computer save teachers thousands of hours of routine instruction that could be used more creatively? What supervision is needed to make sure that students are really doing the task, not just pushing the buttons?

12. What effect will word processing have on the quality of student writing? At what age can a child learn to use a computer for word processing in a reasonable amount of time? At what age are editing and rewriting appropriate, and at what age counterproductive? Are programs that correct spelling and grammar electronic "trots," or do they free the mind to concentrate on ideas, not mechanics?

13. How can schools use the computer to bring the arts and sciences closer together? Conversely, what types of computer use enlarge the gap between them?

14. Are creativity and computer use mutually exclusive? The computer can relieve the creator of ideas of much drudgery and provide opportunities for invention through electronics. When teachers are intimidated or reluctant to use the computer, they have difficulty seeing its potential for developing higher-level thinking skills. How best to reduce this intimidation?