The School-Home Connection


Q: What future roles will computers play in the school-home connection?

The same question can be asked about reading, writing, and arithmetic. Over the past 25 years, there has been considerable research showing the academic advantages that children gain if they grow up in a home in which parents routinely model, and help their children acquire, these basic skills. Computer-related technology is providing the underpinnings of some new "basics." This technology is of rapidly growing importance, and it seems clear that it will stand the test of time.

Technology, Now and Just Ahead

Near the end of 1994, Business Week published a special issue titled "21st Century Capitalism," exploring the directions that world business and trade may take in the next decade. This issue is rich in data. For example:

- Currently, about 36 percent of the US households have a general-purpose microcomputer.
- Worldwide production of microcomputers in 1994 was about 44 million machines.
- Worldwide installed base of microcomputers is about 150 million machines.
- Worldwide, more than 7 million miles of fiber optic cable were installed during 1994.
- Samsung Company in South Korea has recently begun to produce small quantities of a 256-megabit memory chip. (Currently, the 64megabit memory chip is at the leading edge in commercial mass production.) In 1993, South Korea became the world's leading producer of memory chips.

Business Week predicts continued rapid increases in the speed, internal memory, and external storage capacity of microcomputers. There will be continued rapid growth in installation of fiber optic cables, and the carrying capacity of these cables will grow very rapidly. There are a number of predictions about how educated people from throughout the world will compete for high tech jobs as global trade rapidly expands and as the Information Superhighway becomes a reality.

Two conclusions seem evident to me. First, school systems throughout the world will be hard pressed to deal with the continued rapid progress in microcomputers and the Information Superhighway. Second, there will be rapid expansion in worldwide competition for well-educated employees who function comfortably and effectively in a high-tech world.

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What does all of this have to do with the school-home connection? Here are three ideas:

1. It takes many years of training and experience to achieve one's full potential in any area of academic endeavor. Students who have good access to computers at home and routinely use them for communication, information...
retrieval, problem solving, playing intellectually challenging games, studying, and so forth will gain a significant advantage over students who only have access to computers at school.

2. A large number of students have parents who work in computer environments more advanced than the computer environments in most schools. The computers that these parents tend to acquire for home use, and the individual high-tech help that they can provide their children, are potentially beyond what the typical school can provide. In addition, many of these parents have far more knowledge about use of computers as an aid to individual and group productivity than do the teachers of their children. Many routinely model computer use that is beyond what students learn in schools.

3. The amount and quality of commercially available computer-assisted instructional software and academically respectable edutainment software is growing rapidly. Eventually we will see comprehensive packages of CAI materials being marketed to the home. Thus, students with good access to computers at home and parents who support the intellectual use of these machines—will tend to gain an advantage over students who have computer access only at school.

Recommendations

Millions of students are learning more about and from computers at home than in school. Although we lack adequate long-term research on outcomes from this home computer environment, it seems likely that it will produce a substantial advantage for these students. This provides the basis for two recommendations:

1. Computer savvy parents may be able to make a major contribution to their children's education by providing a computer-rich home environment, modeling effective use of the facilities, and instructing and encouraging children in their use. This can start well before children go to school.

2. Schools should make use of students who have computer knowledge and skills that are far above the average for the classes the students are taking. These students can help other students to learn. They can model routine use of computers as a personal and group productivity tool. They can help their teachers to learn.

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