

Home computers and school equality

Elementary schools play a key role in the way children use home computers, but the machines may stir up conflict between schools and parents, according to a study released last week by researchers at New York University in New York City.

The study finds that children do a lot of programming on home computers when they are exposed to programming at school. Video-game playing is the most common home activity, while educational software is rarely used.

As computers cluster in more middle- and upper-income families, equality of education may become a sore point, according to the report. Families generally favor the achievement of their own children over equal educational opportunities for others; schools, on the other hand, try to ensure that students have the same educational opportunities. The study cites one case in which a teacher prohibited a student from doing homework on a computer because other students did not have them. The girl's parents told her to ignore the order. This conflict "may become pronounced as effective home educational software is developed, diffused and used by families who can afford it," says the report.

Traditional lines of authority for teachers and parents may be disrupted if children begin to learn more on home computers than they do at school, says sociologist Joseph B. Giacquinta, who directed the study.

The findings are based on observations of 20 middle- and upper-class families, most of them white and from the New York City area. Families were observed over a three-month period.

The schools that children in the sample attended had computer science courses that emphasized programming and influenced home computer use, notes the report. The researchers are not sure, however, why professionally prepared educational software was rarely used at home.

Families got a lot of use out of their computers, though. "There was at least one active computer user in 17 of the 20 families," says Giacquinta. "The active user was usually a child."

The study also concludes that home computers reinforce the existing family structure rather than altering it in any fundamental way. Close, expressive families tend to remain close and use the computer together, while individualistic, reserved families use the machine separately.

Although most parents hope computer experience will place their children at an advantage in school and later in college, parents also worry that their offspring will become obsessed with computers. A majority of families laid down rules to limit home computer use.

In three families, says Giacquinta, the marriage showed signs of strain due to excessive computer use by one spouse.

Despite the small sample size, Giacquinta says the findings provide a good indication of how home computers are being used. The researchers plan to study the families for an additional six months before enlarging the sample.

A Head Start can have advantages

High-quality preschool education programs such as Head Start can help poor children to lead significantly more successful lives by the time they reach 19 years old, according to a long-term study.

Starting in 1962, investigators at the High Scope Educational Research Foundation in Ypsilanti, Mich., followed 123 poor black youngsters from Ypsilanti. The children, about half of whom were randomly assigned to a preschool program, were contacted annually from ages 3 to 11, and again at ages 14, 15 and 19. Those who had been preschoolers had markedly higher rates of high school graduation, college or vocational training and employment. They also had much lower rates of teenage pregnancy, welfare dependence and criminal arrests.

Marrow transplant for genetic disease

Heritable storage diseases are marked by failure to produce an enzyme needed to break down metabolic products that can choke up organ systems and cause impairment or death.

Krabbe's disease is a heritable storage disease in which a buildup of a fatty acid destroys nerve tissue. In the Sept. 7 SCIENCE, researchers from Johns Hopkins University in Baltimore report they semi-successfully treated mice with the same buildup as in Krabbe's disease by transplanting them with bone marrow capable of producing the needed enzyme.

"We've not shown in giving the marrow transplant if the enzyme gets into the cells or if the transplanted cells set up shop to repair the nerves directly," says Andrew Yeager. But somehow the needed enzyme was at work. The mice, with a life expectancy of 45 days, lived 56 to 115 days and their peripheral nerves showed evidence of repair. Unfortunately for the mice, the enzyme evidently did not cross the blood-brain barrier, so the treatment did not halt the brain damage.

Stop it

It's enough to give SmithKline Beckman Corp. ulcers.

A study supported by the giant Philadelphia-based pharmaceutical manufacturer indicates that stopping smoking is a more effective preventive against ulcer recurrence than is their popular ulcer drug cimetidine (trade name Tagamet), a virtual gold mine for the company. The patented drug has brought ulcer treatment out of the operating room and into the pharmacy, and while the new study does not question cimetidine's ability to treat ulcers in the short term, it points to a drug-free way to halt the nasty, chronic habits of ulcers.

Nineteen medical facilities and 370 ulcer patients participated in a one-year evaluation of long-term cimetidine use. "Smokers who received cimetidine were at least as likely to have a recurrence as were nonsmokers who received placebo," states the report in the Sept. 13 NEW ENGLAND JOURNAL OF MEDICINE. The recurrence rate for smokers, 72 percent in the placebo group, dropped to 34 percent in the cimetidine-treated group, but that reduction doesn't look as wonderful when it is compared to the 21 percent rate in the nonsmokers who took a placebo. (The nonsmokers on cimetidine had an insignificantly lower rate.)

"In smokers, giving up smoking may be more important in the prevention of ulcer recurrences than administration of cimetidine," the researchers conclude. A spokesperson for SmithKline says the company is in agreement with the smoking-ulcer connection, but feels that cimetidine is useful for long-term treatment whether or not a person smokes.

Says one of the authors of the study, David Y. Graham of the Veterans Administration Hospital in Houston, "If you smoke you're more likely to get an ulcer, it will be more difficult to heal, and after it heals it will be more likely to recur." Says an accompanying editorial, "Time to quit."

Coloring against sex abuse

Sexual abuse of children seems to be reaching epidemic proportions. Joining in the fight against it is the American Medical Association, which has produced an inexpensive 35-page coloring book for children that tells them about loving sex and abusive sex, and the difference between the two.

Written by a psychiatrist, *Sex Talk for a Safe Child* provides children with ways to get out of difficult situations. If an adult tries to force sexual attention on a child, the book advises: "Yell 'No, that's wrong, stop.' Always tell your mother or father so that it does not happen again."

Information on how to purchase the book can be obtained by writing to: Order Department OP-234, American Medical Association, P.O. Box 10946, Chicago, Ill. 60610.