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Education

# Computer Training In Schools

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**PHYSICS** is on the curriculum for a class of 11-year-olds at Elisabeth vor Thuringen Gymnasium (high school) in Cologne.

Thirteen pairs of eyes follow a trolley that rolls along an artificial track—according to the principles of "constant acceleration".

The physics room's equipment includes a data point with the most modern computer technology. Discs; interface; screen and print-outs are part of the apparatus for experiments.

A computer helps in the experiments working out swiftly the mathematical formula that lays down the movement of the trolley.

Previously it would have taken six hours to work out these calculations from the physics textbook. In the age of the computer it took 45 minutes.

Physics teacher Horst Gohler said: "It makes everything more interesting; the pupils are motivated".

But the physics department is not alone in being delighted with the new technology. Biology and mathematics are being taught more and more with the use of computer screens all over the country.

In Baden-Wuerttemberg ninety per cent of gymnasia have computers.

In Bavaria three out of four gymnasia and comprehensive schools have basic computer equipment. In North Rhine-Westphalia every second gymnasium has a computer.

A lot of money has been handed out by the central government and the states for this technological advance.

Taxpayers' money to the tune of DM 52 million has been provided for 50 test models. In the immediate future DM 25 million will be earmarked for computer technology in vocational training.

The introduction of the computer into the classroom has not come about through the efforts of the teaching community but has been the result of educational policies that have an eye to technological development

and are led by economic interests.

Dorothee Wilms; Education Minister (CDU) said at a conference on education and the computer in March that West Germany wanted this.

She linked information technology with "hopes for economic growth new jobs; more leisure and a more pleasant quality to daily life."

Along with the Federal Minister for Research and Technology Heinz Riesenhuber (CDU) she wants to see more and more computers introduced into school as soon as possible. She believes there is no alternative.

Computer producers have not the message. In September the central association for the electronics industry and the West German association for engineering and installations formed a promotional association for computers and education. The aim of the association is "to take immediate measures for the incorporation of information and communications technology in school training.

Member companies have already been active. A brochure from the Education Ministry says that one Frankfurt firm has supplied 90 elementary schools each with four computers including accessories and programmes. The total donation amounted to one million marks.

A Bonn computer manufacturer has said he is willing to loan a computer expert for educational purposes and is considering supplying "computers and computer equipment worth DM50,000 for the project".

Computer manufacturers have learned their lessons well. The commercial aims of these endeavours are to awaken a consumer need among school-boys and girls and teachers; attach future customers to a specific producer and demotion anxieties as regards new technology.

Computer producers are not the only ones benefiting from Bonn's programme to "de-mystify the new technology"; as announced by Minister Wilms.

Manufacturers of equipment

for chemistry and physics instruction are benefiting. Manufacturers of training equipment for chemistry education; with chemistry labs already well equipped; are forgetting their past fears about future business and are filled with new hope.

Gunter Gauf; marketing manager of a Cologne educational equipment manufacturer makes no secret of the fact that computer are getting a lot of buyer attention because "additional experiments are possible." This means that additional new equipment is necessary.

The Bonn government is satisfied. A spokesman said: "The appeal is falling on fecund ground. Further action is expected".

It is unclear from this government statement how computer technology is to be introduced into the educational system. It could develop into just paying lip service to the concept.

Imme de Haan; a media expert from the Evangelical Church's public relations department said that with increased computerisation it was essential that social factors should be more strongly promoted. He said that these included; apart from solidarity; "intuition spontaneity; creativity" and particularly "ability to use leisure time." Only then; he maintained; was there any sense in this development.

One of the establishments that can help is the state institute for teaching and further education in Soest; North Rhine-Westphalia. Fifteen teachers from commercial and vocational training schools met to discuss the theme; written in chalk on the blackboard; "Data processing and organisation studies".

One aim of the discussion; according to the agenda; was how to familiarise teachers not particularly new-technology-minded with computer technology.

But the discussion returned time and time again to which manufacturer offered the best best discount.

The participants in the Soest discussion did not linger long

over the question whether the new technology developed "more rivalry rather than social instruction; more standardisation rather than creativity more dependence on computers rather than development of the individual".

Despite "educational concepts" and the divisions computers have created among computerised teachers and the others experience has shown that "schoolboys and girls are much better geared to computers that the teachers themselves"; according to Imme de Haan.

The "basic education via information technology" aimed at by the Bonn government will be expensive for parents. More and more private computer schools are doing very well from "the educational challenges offered by computers"; to quote Minister Wilms. For their children to attend a four-teen-day computer course at a school in Willingen in the Sauerland parents have to put up DM 1,200.

The organisers are two former members of a Hamburg computer manufacturer that has supplied the equipment.

Up to twenty boys and girls; meeting in hired hotel rooms; are according to the firm's hand-outs "not letting the computer age pass them by".

The managers of "computer camps" quite unashamedly quote high prices on the grounds that computer-trained school-boys and girls have better job possibilities and are able to have a good time "playing with computers".

"There comes a time when a model train set comes to the end of its interest. The computer goes on and on".

For this reason very young boys and girls take part. The youngest was a nine-year-old.

There is some doubt if such courses as those offered in the Sauerland would help participants to "achieve a good standard of living and remain in employment" according to Minister Riesenhuber. A thirteen-year-old put the matter

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