

COMPUTERS AT HOME: BAD NEWS FOR EDUCATIONAL OUTCOMES

Computers in the classroom have no discernible positive effect on children's educational performance while computers at home could actually be detrimental.

These are the conclusions of new research by **Thomas Fuchs** and **Ludger Woessmann**, presented at the Royal Economic Society's 2005 Annual Conference at the University of Nottingham.

It appears that computers at home are not exactly used for running educational software, mining the internet for useful data or composing better homework assignments, all things that would have a positive impact on performance, but rather for playing games, chatting and otherwise providing entertainment. Computers thus displace other activities more conducive to learning.

At school, the picture is a bit different, but the result isn't. Taking account of the availability of other resources at school, the mere availability of computers does not translate into higher student performance, at least not beyond a certain frequency of use. This gives rise to a curiously inverted-U-shaped curve for performance against frequency of computer use:

- Little computer use, poor performance.
- Moderate computer use, higher performance.
- Frequent computer use, poor performance.

This latter finding appears to point to displacement of more effective teaching methods by time spent before a computer screen or even to diversion of funds that might have been better allocated to instructional material or improving teacher training.

At any rate, the trick seems to be *what* you do with the computer, not its mere availability. Email use, website accessibility and educational software have all something going for them, both at home and school.

To get these results, Fuchs and Woessmann – two education experts from Germany's Ifo Institute – have taken a detailed look at the internationally comparative data on educational performance known as PISA (Programme for International Student Assessment), the initial release of which seemed to indicate a positive correlation between computer availability and educational performance.

What the Ifo researchers have done is look a little deeper. They controlled the data for students' family background and availability of other non-computer resources at school, and the picture changed radically.

Family background characteristics have been shown by many studies to play a significant role in students' educational achievement. And when you analyse the PISA data taking such background into consideration, the positive correlation between computer availability at home and performance at school turns negative.

ENDS

Notes for editors: 'Computers and Student Learning' by Thomas Fuchs and Ludger Woessmann was presented at the Royal Economic Society's 2005 Annual Conference at the University of Nottingham on Wednesday 23 March.

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