

upon driver knowledge, skills, critical thinking, decision-making and judgement. Similarly, in relation to the more widespread introduction of IWBs in Britain, academics from the University of London's Institute of Education have raised doubts about the long-term benefits of whiteboards, and cautioned that '*some teachers focused more on the new technology than on what pupils should be learning*' (Age, 30/1/07:8). According to the Age report, education ministers and head teachers have rejected the conclusions. It seems that the critical factor is the pedagogy associated with the IWBs. According to Trent Smith, of Hunt High School, in Wilson County, USA, provision of a laptop for every faculty member and every student is expected to '*serve as a shining example of how a simple investment in technology can improve student outcomes*' (Star-Telegram, 8/2/07:1). If only it were that simple. Clearly, access is important to enable improved learning outcomes, however, by itself, it encourages, at best, a focus on the technology, rather than a focus on learning.

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Is Learning Improved?

TECHNOLOGICAL advances and accompanying reductions in costs have enabled teachers and students in schools to use new technologies, such as interactive whiteboards and laptops. However, the key question continues to recur – **does improved access to new technologies result in improved learning outcomes?**

In Britain, a scheme costing £50 million (\$AUD126 million) has been implemented to replace blackboards in schools with interactive whiteboards (IWBs) (Age, 30/1/07:8). IWBs are now in '*half of all classrooms in England*' (Age, 30/1/07:8) while, in Australia, the Northern Territory Education Department has taken delivery of two laptops, each costing just over \$125, to test them with a view to providing them in a wider roll-out (Sunday Territorian, 14/1/07:1). These are the same computers being used in the One Laptop Per Child program already underway in Brazil, Argentina, Libya, Nigeria and Thailand (Sunday Territorian, 14/1/07:1).

The project, reportedly the idea of Nicholas Negroponte, founder of the Massachusetts Institute of Technology Media Laboratory, could substantially improve teacher and student access to laptops in the Northern Territory, and in those developing countries (Sunday Territorian, 14/01/07:1).

We know that, with other technologies in the past, access, by itself, does not ensure successful participation and outcomes. For example, we know that higher levels of ownership of more technologically advanced motor vehicles have not resulted in fewer road fatalities. The ways in which motor vehicles are driven, and driver responses required in different driving conditions still rely