

'Give every student a computer...'

A much-derided programme to equip 33,000 secondary students with laptops in the US state of Maine has now become one of the most celebrated IT initiatives for education. Could it work here? JOHN KENNEDY reports from a Dublin conference where US experts share their vision

THE fact that Professor Seymour Papert, Massachusetts Institute of Technology's Media Lab founder, visionary computer scientist and innovative developer of educational theory and technology, is thinking of entitling his next book *Fiddling While Rome Burns*, hints at his exasperation at how the educational world has embraced technology. Papert was in Dublin recently attending a Europe 2004 conference, entitled *Ireland: New Futures for Learning in the Digital Age*.

Says Papert: "There is an immense paradox in terms of how the education world has adapted to technology. The school has actually been the laggard in the adoption of technology in education. Technology is the means for future of learning yet most educators say that it is too expensive, and as a result, a negligible amount is actually spent on technology in schools in most developed countries. The situation is absurd."

One day, a few years ago, Papert had an idea. He rang the Governor of Maine and convinced him of the wisdom of equipping 12-year-old school children across the state with their own laptops. Two years later the Governor followed through and some 33,000 secondary students and their 3,000 teachers were each given an Apple laptop under what is known as the Maine Learning Initiative.

The initiative, which involved a US\$37.2m contract with Apple for iBook laptops, software and wireless networks, made Maine the first state in the US to offer universal laptop distribution to middle-grade students. However, upon introduction, the project also was greeted with universal disdain and derision.

Papert recalls: "When this was first announced the reaction was negative. Newspapers wrote editorials dismissing it. It took two years before people could accept it. The education world is very conservative and teachers at the time were very negative. However, once the computers were there, teachers and students found that their work was transformed."



Gaston Caperton speaking at panel discussion regarding US policies on ICT and education held at the Media Lab Europe recently

A trial at one school found that since the laptops were introduced, absenteeism dropped by 50pc. Detentions dropped from 28 every 96 days to just three in 79 days. Using the laptops, 91pc of students raised their grades in at least one academic area, 82pc improved their grades in at least one academic area and 73pc improved their grades in three or more fields.

When the idea was first mooted the cost seemed prohibitive, but because Maine had reported a US\$50m budget surplus, the Governor at the time, Angus King, decided to press ahead with the challenging initiative.

Papert is adamant that equipping students with computers is the way ahead, instead of the shambolic approach by most educators to install a single computer in most classrooms, an approach emulated throughout the world (including Ireland).

Negligible investment

When convincing educators throughout the world of the merit of taking this approach, Papert uses the analogy of a highly developed country with a culture of learning but no writing. "One day they discover how useful writing can be and then somebody decides 'I know, let's put a pencil in

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every classroom'. That's how absurd educators' approach to technology is. That's the immense paradox that is stifling education in the 21st Century. Give every student a computer!"

Papert argues that the investment in giving every student a computer is negligible in the context of his or her overall educational lives. "Really it equates to only 1pc of the cost of someone's lifetime education. Since we introduced computing for every student in Maine, we've seen a 5pc improvement in grades across the board. The bottom line for all of this ultimately is careers. Another key area that this has impacted is special learning for children with learning disabilities. It crosses the divide, bridges gaps and creates equality.

"Teachers themselves have benefited greatly from this and I can guarantee you that even the most outspoken objectors at the time are now convinced of the merits of this scheme. This is only the beginning, though. We are only scratching the surface of what can be achieved.

Papert's colleague Bette Manchester, educational commissioner for Maine and a member of the Maine Technology Learning Initiative Team, backed up his argument: "The idea was greeted initially with outrage. Teachers were using computers at the time, but only at home, not in the classroom. As we were

rolling this out it became clear, especially to the teachers, that there is a match between technology development and professional development. Every school in Maine is following this model. It is completely wireless and computers are at the heart of the classroom.

"Professional development has been critical to the success of the project and, when you talk about equity in the classroom and how education is a great equaliser, this is the first time in Maine, even in the US, that a resource has been given to students regardless of their background, income or where they live," he adds.

Gaston Caperton, who also spoke at the conference, said that the goal of most US educators today is to pursue the goal of equity in education, by giving students the tools and the resources to pursue education on an equal footing. Caperton, a former governor of West Virginia, worked with Papert to roll out a similar initiative in West Virginia and sits on the prestigious college board and co-ordinates the selection of students for third level across the US.

He highlighted how technology properly implemented in education can help schools, especially those populated by poor students. "There's a town in Texas called Edinburg where 85pc of all students are from low-income families. With the right focus it's possible to build students up to be academically successful. The school got funding through a programme called the Inspiration Awards. Today, 75pc of the school's students are going to college. "This is what we are all fighting for. It is important to bring all students up to a strength where they can succeed in college."

In conclusion, Manchester warned that the policies of European education ministers in relation to technology in education are diametrically in opposition to those of US educators and urged European educators to consider a more holistic and practical approach to the use of computers by school children.