Storming the open mind

Pioneering mathematician Seymour Papert tells Karlin Lillington he believes children - and adults - need more exposure to computers to develop creativity.

That brought its Media Lab Europe to Dublin, and connections made at that time with St Patrick's College of Education have turned into a fruitful relationship which could make for exciting change in Irish schools.

"We're hoping to develop a project in Ireland that would feel out towards more radical changes in the Irish educational system," he says. He knows that many teachers here are frustrated, feeling the existing system is "antiquated and dinosaurian. They don't know what they want in place of them, but they pine for something. Often they feel technology is a way out." But he notes that school systems usually "put technology in a particularly useless way!" Computers are often used passively as a kind of additional electronic teacher in the corner offering up maths and reading lessons. That's not his vision of technology, which is intensely creative, involving children and teenagers in programming, building and interacting with robots, pushing their imaginative boundaries.

"For the computer to be used creatively by a kid, the kid has to be able to get to it for enough time to be able to master it. So, one cannot have enough computers; and two, the school has to let that happen," he says.

For him, combining kids and technology helps them explore the question that has fascinated him for decades: "What does it mean to learn differently?" He notes the resistance to any teaching model other than the highly structured environment in most schools.

"So many people are immersed in their own school experience that they can't see any other model," he says. And there's often particular resistance to technology - many teachers and parents fear it as something that sidelines, rather than encroaches, creativity, locking kids indoors and making them socially isolated. "That's why technology poorly used, not technology per se.

And of course, teachers and parents fear that the kids already know more about computers than they do, and that they can never master them. "What's going around is stories - often exaggerated - of small kids learning a lot very quickly," he says, but he doesn't believe adults inherently learn more slowly than children, or that they are any less capable on computers.

He compares the situation to language learning. "The adult is afraid to even say two sentences in the language - they feel silly. Whereas kids don't think that way.

It's the same with computers. Kids will immediately try things out. They do a whole lot of investigating, and as a result, they pick up knowledge.

Learning blockages aren't in the nature of being a child or adult. It's in the nature of the culture, an anti-learning culture. And that's why he is so interested in looking for new and vigorous and exciting ways of learning - but those pose major challenges for the existing system. The big job with teachers is to encourage them to be less inhibited about their own learning process," he says. "For a teacher to let on to not knowing something - this is considered incompetent. Yet isn't there a paradox there? People want our students to be better learners. You'd guess that a kid should then work with a teacher who's learning.

In addition, our culture increasingly wants schools to conform to modes of learning and a curriculum which come from a different era and are no longer wholly relevant today. "Society is changing rapidly, but school is not changing. Kids are aware of its social obsolescence, which undermines anything it's trying to do," he argues.

So how do you initiate change? "In fact, what works in the Irish economy, and what we saw spectacularly demonstrated in the Irish economy in the 1990s - let diversity develop! The reason why it works is, nobody's deciding," he says. He notes that many successful schools worldwide already encourage diversity: "The New York system most notably has allowed teachers to create alternative small schools. But he's a strong believer that all students should be equipped with a computer, and that this should be provided by governments. To his delight, his home state has approved just such a programme, which he fought for himself. "The year after next, every seventh grade [12-13 years] will get some form of personal computer with free access to the Internet," he says proudly. But surely, many would argue that such a scheme is expensive and irrelevant? "I say to education planners and politicians: just look ahead. Think of five to 15 years into the future, and look what's happening in society today. The computer is becoming the medium for every form of intellectual engagement. The only exception," he sighs, "is learning.

Knowledge cannot be separated from the technology used to express that knowledge. When we moved from an oral to a written culture, different kinds of knowledge were valued. It was a deep and bitterly fought change in society, and we're going through the same thing now.

But mention Ireland and his face quite literally radiates pleasures and excitement. "The Irish! You have something very different here, I think," he says, as he stands to go. "I've found imagination, exuberance, fantasy. The Republic might be the ideal place to try new ways of learning that could serve as a model for larger cultures, he says. He hints that he may take a placement with MIT's Media Lab Europe in Dublin, and he's clearly captivated by the work he has done so far at St Pat's. And then, mid-sentence, with a quick grin, he's gone.