

WHERE DO WE GO FROM HERE?

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We have seen the future and the future is good." Steve Rush was referring to his school, St. Andrew's College, but the IT director could have been referring to any one of three schools in York Region.

Slip into a classroom at the Aurora private school, St. Augustine Catholic High School in Unionville or Sir William Mulock Secondary in Newmarket for a glimpse of the future.

No, they're not connected by nano-sensors to a global brain bank, but what students are doing is still the stuff of science fiction for their parents. Before they leave for school, they power up devices, pack knapsacks not with textbooks but laptops, start class not with the click of a pen but the click of a mouse.

These students are pioneers in digital learning; their trail-blazing raises questions for educators about what else lies ahead — for students and teachers — and who will pay for it all.

At St. Andrew's, students rent laptops from the school for about \$2,000 a year, which covers repairs, replacement, software and technical support. Every three years, the unit is replaced.

"It's expensive but worth it," says Heather Pilmer, whose son, Taylor, is in Grade 9.

Taylor left his device on the floor one day and his father accidentally broke it. Another time, he forgot it at school. What could have been expensive mistakes were remedied thanks to the replacement plan (although the school does have a "three-strikes" policy).

"It would be great if all schools could do this," says the Markham mom who appreciates the way loose papers are organized in a virtual binder and students can keyboard or write with a stylus. "I can't imagine him going back to writing on paper. It would be too archaic."

A similar experiment has been under way at St. Augustine where 108 students are enrolled in the high-demand laptop learning program.

Marina Khouzam, 17, persuaded her parents to let her take part. "I told them our world is evolving and if we don't keep up, we could fall behind for university — and they bought it."

St. Augustine students use \$2,400 laptops, purchased by parents (there is a bursary program), loaded with all the software required.

Sir William Mulock, in a middle-class community in Newmarket, is trying something different. The school began a blended learning program this year with Grade 9 students, requiring them to buy their own portable computers — any make, any price. For those who can't afford it, the school purchased 30 netbooks, with 14 used by students, the rest loaned to those whose devices require repair.

Eventually, it's hoped the entire school will learn this way.

It's a unique "proof of concept" school that



GAZING INTO THE FUTURE: Morgan Burgess, a kindergarten student at Jersey Public School in Keswick, holds an iPod — and his educational future — in his hands.



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the board — and educators elsewhere — are watching closely; so far, principal Joseph Ravesi says he's pleased.

The laptops are used every day, in almost every class and students believe they're improving academically.

Mr. Ravesi is seeing more engagement of learners, digital literacy, collaboration between teachers and students, plus fewer behavioural problems.

"It's a phenomenal environment. I've been a principal for 21 years and thought it would be messy, but it's been amazingly smooth."

Teachers are so impressed, they're transferring their own children to William Mulock.

These three schools represent the first wave in what many are predicting will be a technology tsunami.

"We are in a time of such momentous technological, cultural, economic and social change," says author and Duke University professor Cathy Davidson. "The best we can do as educators is to help our kids be prepared for their future — not for our past."

She calls for a dramatic rethinking of how students are taught, teachers trained and programs funded.

Mr. Ravesi says his school's experience with cheaper, generic devices shows funding may not be as big a hurdle as some fear. Some students use netbooks bought for \$200 on

eBay. Or he suggests schools could purchase the devices and students could pay for them in instalments.

Industry is also stepping in. Best Buy, for example, gave Canadian schools \$250,000 in gift certificates this year and the education ministry is watching trends, too; some expect the issue to be addressed in the upcoming provincial budget.

While digitalizing the classroom raises questions about cost and accessibility, Catherine Fife, president of Ontario Public School Boards' Association, cautions there are more important issues to solve. The province needs a clear vision of the new classroom and how teachers can be trained. "We've got to stop chasing after software and hardware."

'Technology can be a wonderland or a wasteland.'

Some teachers find keeping up with new technology a struggle in an already overloaded workday. Some fear computers because of classroom management challenges.

As one teacher says, "You almost have to have two lesson plans: one for when it works; another for when you bungle it up and you have to go back to the old-fashioned way."

Others worry technology could squeeze them out of jobs — some courses in Miami, for example, are taught using computers in a classroom with no teacher, just a facilitator who deals with technical problems.

But teachers who have tasted the electronic elixir are intoxicated with the idea of a profession in transition.

At St. Augustine, teachers swarm to after-hours classes to learn 21st-century methods, says principal Bernie Smith.

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Teachers in Mulock's blended learning program have a new spring in their step, says their principal.

But getting teachers up to speed will require more than traditional one-day workshops, says Ron Owston, York University's director of the Institute for Research on Learning Technologies. Real classroom impact only occurs with long-term training, on-the-job, online and face-to-face.

Professor Ben Levin of the Ontario Institute for Studies in Education, cautions tech skills alone won't lead to successful classrooms: "Good teaching is good teaching ... whether the iPhone is on or not is irrelevant. It's simply not the case that technology makes lessons interesting."

Andreas Schleicher, education analyst for the Organization for Economic Co-operation and Development, agrees. Technology is "remarkably absent" from classrooms in the world's best-performing school systems, which place their efforts primarily on pedagogical practice, he says.

"I have this debate with myself all the time," says Mark Melnick, teacher and tech mentor at Markville Secondary School.

"Technology can be a wonderland or a wasteland. I ebb and flow between hating it and seeing how it connects with kids. A lot of times the way it's used is gimmicky, not sound pedagogy."

But it's coming, he says. "I think people are underestimating how big it's going to get."

"You cannot stop the fact that kids and adults are learning in the 21st century," agrees Mr. Ravesi.

After 36 years in education, he's convinced the transformation of Mulock Secondary was the right thing to do. "We're hitting the nail with this one. We're exploring new territory and we don't know what's over the next hill, but it's a great journey."

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