



Ontario Centres of
Excellence

Where Next Happens

"Tell me about punch cards and room sized computers..."

"Our students ... grew in so many ways, thanks to the mentoring of the Ontario Centres of Excellence and IBM in the Pioneers in Computing in Canada project."

Alison Mann, Teacher, Ursula Franklin Academy

To the average grade nine student, 1972 is ancient history. There was no Internet, no instant messaging, no cell phones and video games were primitive. So, like, who cares about way back then, right?

Not so for students at the Ursula Franklin Academy in Toronto's District School Board. Focused on developing grade nine to 12 students in information technology, the school was named one of Canada's top 10 technology schools by Maclean's magazine. It was here that a group of over 100 students set out to learn about pioneers in Canada's computing world – those whose work prior to 1972 led us to the technology revolution that now governs the very lives of those young people.

IBM Canada's Pioneers in Computing in Canada project began when Dr. Hausi Muller at the University of Victoria came away from a 2004 conference realizing very few students knew that people in Canadian universities had helped blaze the trail in computer science research. He helped found the Pioneers in Computing celebrations that became part of IBM's CASCON annual conference.

"We are all about making the connection between the technology industry and the universities preparing our next generation of experts – a generation that may not have enough numbers," says Steven Perelgut of

University Relations at IBM. "When Dr. Muller came to us with this idea it made great sense, and when the Ontario Centres of Excellence helped us make the connection with students at the high school level, it made a true success."

In preparation for the 2005 Conference, IBM teamed up with students at Ursula Franklin Academy and obtained funding from the Ontario Centres of Excellence. Two grade 12 students saw the opportunity for a summer job that would allow them to apply what they were learning in their film studies program. Over eight weeks they put together plans for interviewing the pioneers, and began building a real history of academic excellence in computing in Canada.

This was the first time the Ontario Centres of Excellence sponsored internships with students in the kindergarten-to-grade-12 area, and it was an unqualified success – groundbreaking for all partners involved. There was a \$4,000 contribution from OCE, and nearly \$7,000 from IBM in cash and in-kind assistance.

It was serious and hard work for the students: a collaborative effort by the grade 12s and grade nines at the academy. The first week of September, the grade nine students were assigned pioneers and universities to research, conducted telephone interviews to determine a list of key questions to ask on the day of the event, and to submit reports on each pioneer. Using the information collected by the grade nines, the grade 12 students were able to focus on preparation and execution of filming the

interviews on the day of the event.

"This was an actual chance to communicate with people and have a real life experience more than background research," says Alison Mann, the supervising teacher at the school. "Our students learned that these pioneers were integral to the collective Canadian experience of moving computer technology forward."

"The Ontario Centres of Excellence was heavily involved," says Ms. Mann. "They checked in with students and offered encouragement. It was important for them to hear, from the outside, what a good job they were doing."

Achievements the students were able to document include all aspects of the computer world from the founding of university computer science departments as early as the 1960s and 70s to winning many national and international awards and contributing research in computer architecture, computational mathematics, theory of computing, programming languages, algorithms, data structures, operating systems, artificial intelligence, networks, software engineering and human computer interaction.

The information gathered from the pioneers may well serve both the past and the future. Teachers have long lamented there is no material to offer Canadian students on the history of computing in Canada. With the help of OCE and IBM, this document of the pioneering work of Canadians can inspire generations to come to make their mark on science and technology.