

Social Context

Ontario is characterized by a range of boards, from large urban school boards that serve densely populated communities, to northern district school boards that serve small numbers of students spread over wide geographic areas. The school board system is made up of 60 English-language and 12 French-language boards as well as 37 school authorities, which are responsible for schools in small and remote communities. A critical issue in the provision of education programs and services is the diverse ethnocultural composition of Ontario's student population and the large number of children and youth from immigrant families. Through primary and secondary immigration, Ontario receives approximately 68% of Canada's newcomers. To overcome language and cultural barriers that could affect student achievement, boards and schools, especially in urban areas, have to provide instruction in English- and French-as-a-second-language, as well as community outreach services.

Organization of School System

Ontario has two types of publicly funded school boards: public boards, which enrol approximately 70% of the student population, and Catholic boards, which enrol the other 30% of the student population. Of the 5% of students enrolled in French-language school programs, about 80% are in Catholic schools.

In 1998–99, Ontario had 1,394,701 students enrolled in 3,946 elementary and 697,311 students enrolled in 805 secondary schools. There were approximately 117,452 full-time teachers. Seventy per cent of the boards offer French-language education. The school program can extend from junior kindergarten (age 4) to the Ontario academic courses (OACs) usually taken in the final year of secondary school, which are designed to prepare students for postsecondary education and the workplace. Students entering grade 9 in the fall of 1999 will graduate at the end of grade 12.

Science Teaching

Ontario has developed new, expectations-based curriculum in every subject from grades 1 through 12. The science expectations are included in the science and technology curriculum document for grades 1-8 and the science curriculum documents for grades 9-12. Earth and space science has not been a major part of Ontario science programs, other than a rarely offered geology program at the senior level.

Science from grades 1-8 is presented in an integrated science and technology, activity-based curriculum that encourages the exploration of a variety of areas in science and technology.

The new science program in grades 9 and 10 provides a broad overview of science including the sub-disciplines of biology, chemistry, earth and space science, and physics. Grade 9 is the first year in which science courses are offered either as an applied or academic course. Students are required to take science to the end of grade 10, i.e., two credits are required in science for graduation.

In grades 11 and 12, science programs are delivered in the more specialized areas of chemistry, physics, biology, and earth and space science, and offered as university, college, university/college, or workplace courses.

Most 13-year-old students in this assessment are enrolled in either grade 9 science or grade 8 science and technology, both of which are mandatory core subjects. The science experiences of 16-year-old students are extremely varied — from having no science since grade 10 to having completed one or two specialized programs at the senior level.

Science Testing

Classroom teachers are responsible for classroom evaluation and promotion to the next grade level; Ontario does not conduct province-wide examinations for these purposes. The Education Quality and Accountability Office (EQAO) was established in 1995 to ensure greater accountability and to contribute to the enhancement of education in Ontario. In 1997 and 1998, the EQAO conducted a test of all grade 3 students in reading, writing, and mathematics. In 1997, it conducted an assessment in mathematics for a random sample of grade 6 students; in 1998, a similar assessment was administered to a random sample of grade 9 students. In 1999, the EQAO conducted a test of all grade 3 and grade 6 students in reading, writing, and mathematics based on the new curriculum expectations. Province-wide testing of all grade 3 and grade 6 students in these subjects will take place every year. The ministry has also announced that starting in the 2000–01 school year, all grade 9 students will be tested in mathematics, and all grade 10 students will have to pass a test of reading and writing skills to obtain their high school diploma. The following chart indicates the provincial assessment schedule.

<i>Grade/Year</i>	<i>1998–1999</i>	<i>1999–2000</i>	<i>2000–2001</i>
All grade 3 students	Reading, Writing, Mathematics	Reading, Writing, Mathematics	Reading, Writing, Mathematics
All grade 6 students	Reading, Writing, Mathematics	Reading, Writing, Mathematics	Reading, Writing, Mathematics
All grade 9 students			Mathematics
All grade 10 students			Reading and Writing Skills

With respect to the science program, Ontario has a history of involvement in international assessments, such as those conducted by the IEA and the IAEP. In addition, over the past decade, Ontario has conducted provincial reviews in senior division chemistry and physics programs.

Written Assessment

Except for 13-year-olds at level 3, where there is a slight difference, Ontario 13-year-olds and 16-year-olds who responded in English performed as well as Canadian students as a whole.

The performance of 13-year-old Ontario students who wrote in English showed significant improvement between 1996 and 1999 at level 3, while the performance of Ontario 16-year-old students was significantly better in 1999 at levels 3 and 4.

CHART 51

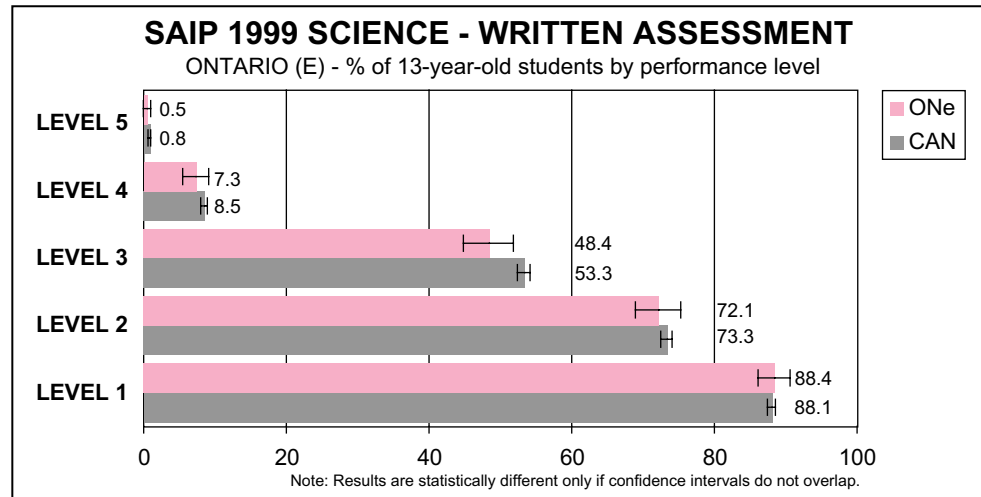
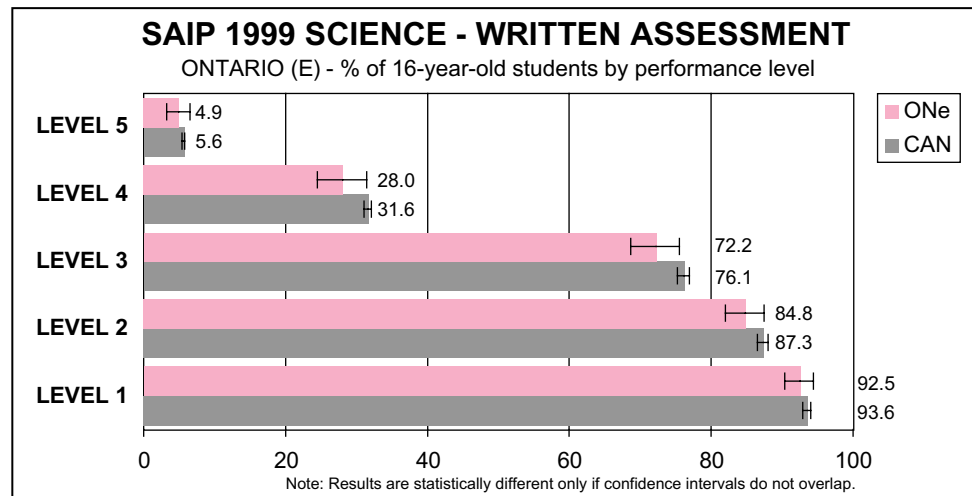


CHART 52



Practical Task Assessment

Ontario 13-year-olds and 16-year-olds who responded in English performed as well as Canadian students as a whole.

The performance of Ontario English 13-year-olds and 16-year-olds showed significant improvement between 1996 and 1999 at levels 3, 4, and 5.

CHART 53

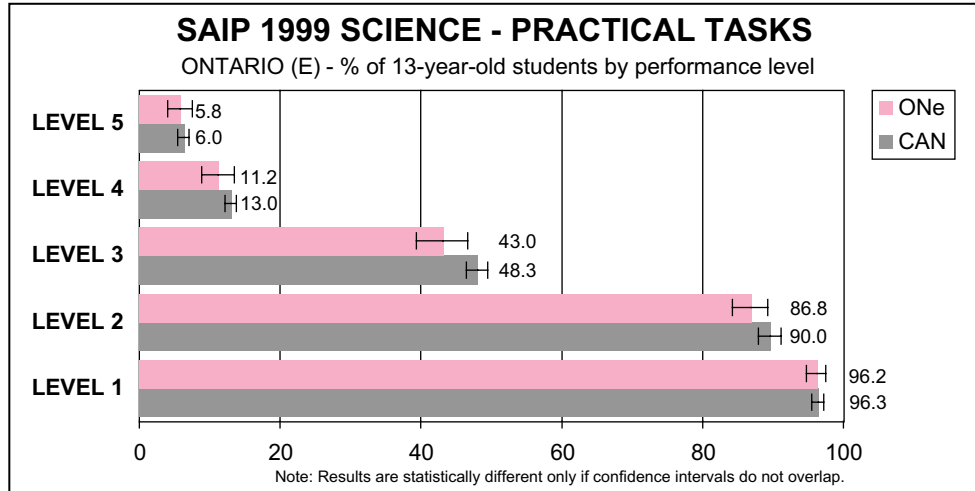
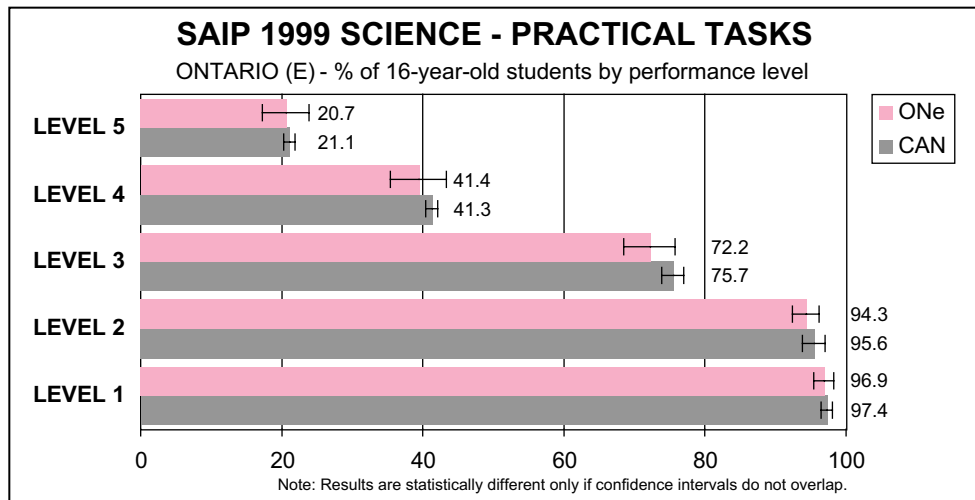


CHART 54



Written Assessment

There are significant differences in performance between both 13-year-old and 16-year-old Ontario students who wrote the assessment in French and Canadian students as a whole.

The performance of Ontario French 13-year-olds and 16-year-olds showed significant improvement between 1996 and 1999 at level 3.

CHART 55

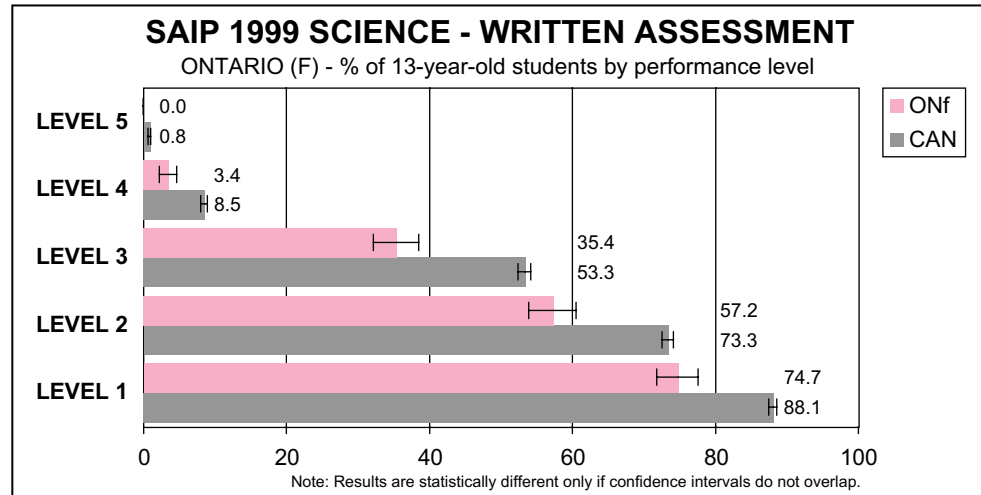
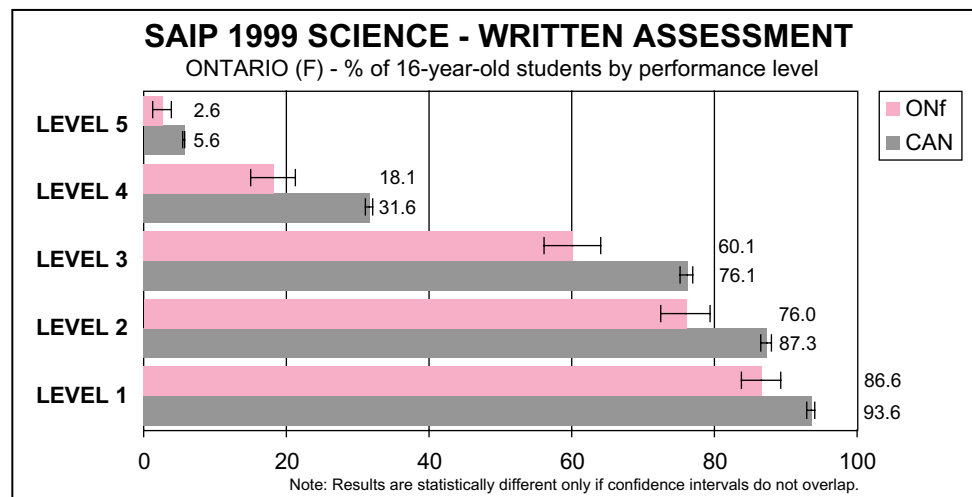


CHART 56



Practical Task Assessment

Ontario 13-year-olds who responded in French performed as well as the Canadian sample as a whole. Ontario 16-year-olds who responded in French performed as well as the Canadian sample at levels 1 and 2, but fewer students reached levels 3, 4, and 5 than did Canadian 16-year-olds as a whole.

The performance of Ontario French 13-year-olds showed significant improvement between 1996 and 1999 at all levels. The performance of Ontario French 16-year-olds showed significant improvement between 1996 and 1999 at levels 3, 4, and 5.

CHART 57

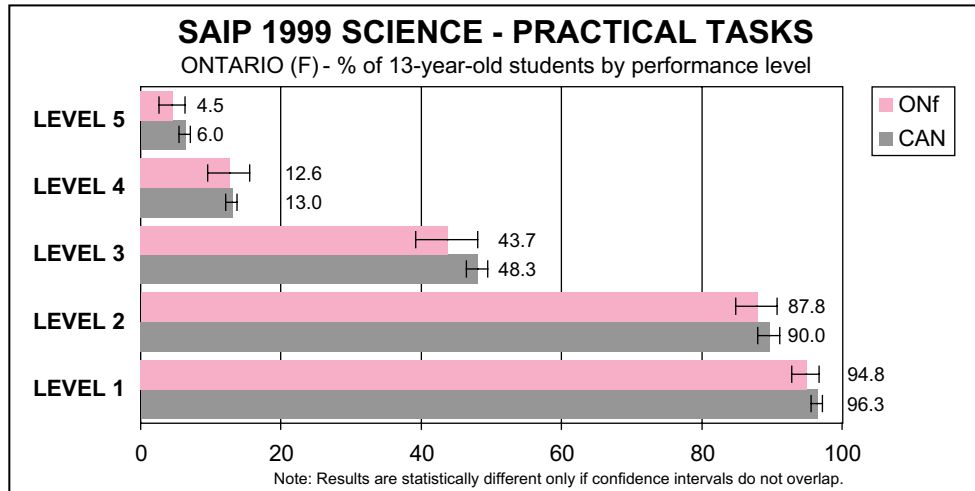


CHART 58

