Introduction

On April 1, 1999, two new territories were created. The Department of Education, Culture and Employment administered the 1999 SAIP Science Assessment in the Northwest Territories and in Nunavut, on behalf of the Department of Education, Government of Nunavut. Data were collected separately, in order to report baseline results for each territory.

Social Context

The Northwest Territories has a landmass of 1,200,000 square kilometres. The total population of 41,000 is equally distributed between Aboriginal and non-Aboriginal residents. There are 33 communities, ranging in size from 17,500 people to a population of 36. In Yellowknife, 78% of residents are non-Aboriginal. In smaller communities, Dene, Métis, and Inuit constitute 84% of the population. An estimated 2% of the total population are francophone. Languages spoken in the Northwest Territories are Chipewyan, Cree, Dogrib, English, French, Gwich'in, Inuinnaqtun, Inuktitut, Inuvialktun, North Slavey, and South Slavey. About half of the Aboriginal people in the NWT speak an Aboriginal language. While English is primarily the language of instruction in schools, Aboriginal languages and cultures are integral to the culture-based education system of the NWT.

Nunavut has a land mass of 1,900,000 square kilometres. Of the estimated 28,000 residents of Nunavut, 85% are Inuit. There are 28 communities, ranging in size from 4,300 to 18. Languages spoken in Nunavut are Inuktitut, Inuinnaqtun, English, and French. Most Inuit (90%) living in Nunavut speak a dialect of Inuktitut. Inuktitut is the language of instruction from kindergarten to grade 6 in most schools. At the time SAIP tests are being administered, most 13-year-olds in Nunavut are completing their second year of formal instruction in English.

Organization of the School System

In 1998-99, the Northwest Territories enrolled 9,800 students in kindergarten through grade 12 and employed 642 teachers in 47 schools. The Department of Education, Culture and Employment provides policy and curriculum direction to five divisional education councils and to the two district education authorities in Yellowknife. The education councils and education authorities implement and adapt curriculum and develop programs to meet the needs of students in their jurisdiction.

The Department of Education, Government of Nunavut, is responsible for three divisional education councils. In 1998-99, the department enrolled 8,000 students and employed 568 teachers in 42 schools.

In recent years, both territories have implemented grade extensions in small schools. In 1990, only 60% of students could complete their high school education in their home community. By 1998–99, that proportion had increased to 92% in the Northwest Territories and to 95% in Nunavut. As a result, more students are staying in school, and more young people who left school before earning a grade 12 diploma are returning to school. The challenge is to provide a choice of quality programs in schools where as few as 1 or 2 students are enrolled in a grade. Innovative program development, use of computer technology, and distance education support many courses offered in small communities.

Science Teaching

Northern parents want their children to have the skills that are required for continuing education and for entering the work force. But they also expect schools to do their part in helping ensure children and young adults learn their culture and speak their own language.

The territorial vision for developing scientific literacy allows students to experience diverse learning from an Aboriginal, culture-based perspective as well as from the traditional Western viewpoint. Students are encouraged to develop a sense of wonder and curiosity through experiencing the interrelationships among science, technology, society, the environment, and traditional beliefs.

The science curriculum provides students with the opportunity to explore, analyse and evaluate, synthesize, and appreciate the diversity of scientific thought. Student learning is enhanced by encouraging students to express personal, cultural, and prior knowledge of science through concrete learning experiences that are conceptualized and applicable to students' lives. Students acquire the skills for gaining new knowledge, they learn to solve problems, and they gain an appreciation of the complexity and impact of science and technology in their lives.

Schools are responsible to provide programs that will generate interest in science and the environment and will encourage students to pursue higher levels of study, leading to science-related occupations.

The Northwest Territories and Alberta are in the process of re-writing a kindergarten to grade 12 science curriculum, based on the pan-Canadian framework.

Science Assessment

There is currently no territorial-wide assessment done, other than Alberta Education's grade 12 diploma examinations and SAIP. A *Student Evaluation Handbook* was developed in 1993 to assist teachers in developing a variety of assessment approaches and instruments.

Over the next year, the department will develop a directive on assessment and evaluation for the NWT. The challenge will be to establish culturally appropriate ways of measuring the success of students and programs in relation to high standards of achievement in a multilingual and multicultural environment.

Written Assessment

There are significant differences between the performance of Northwest Territories 13-year-olds and Canadian students overall at levels 1, 2, 3, and 4 in the written assessment. Northwest Territories 13-year-old students performed as well in this category as students in the Canadian sample at level 5. There are significant differences between the performance of Northwest Territories 16-year-olds and Canadian students overall at levels 1, 2, and 3 in the written assessment. Northwest Territories 16-year-old students performed as well in this category as students in the Canadian sample at levels 4 and 5.

CHART 78

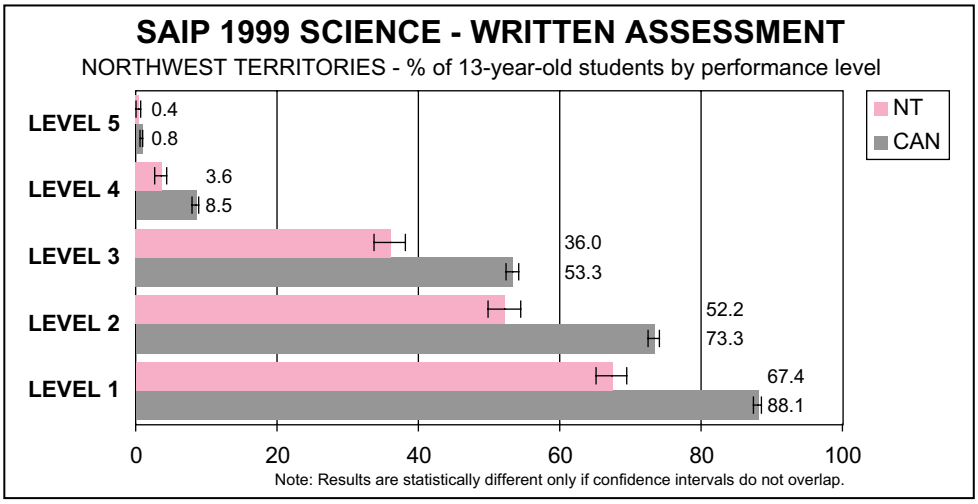
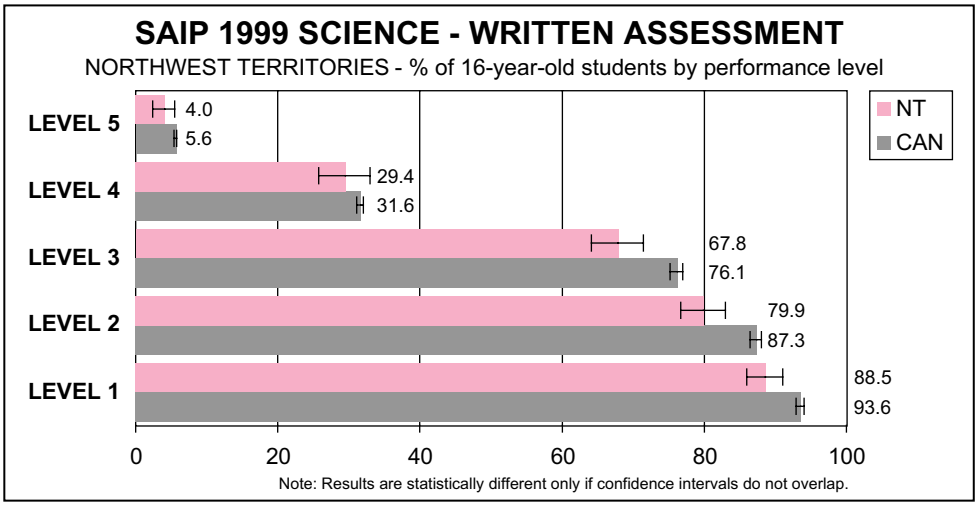


CHART 79



Written Assessment

There are significant differences between the performance of Nunavut 13-year-olds and Canadian students overall at levels 1, 2, 3, and 4 in the written assessment. Nunavut students performed as well in this category as students in the Canadian sample at level 5. There are significant differences between the performance of Nunavut 16-year-olds and Canadian students overall at all levels in the written assessment.

CHART 80

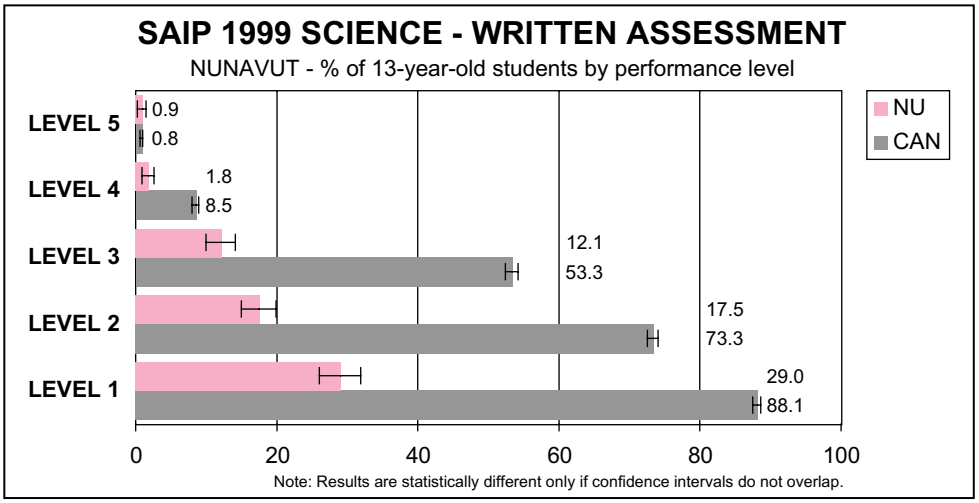


CHART 81