

Universities, colleges have role to play in teaching numeracy skills, report argues

Teaching numeracy skills shouldn't be the sole purview of the province's primary and secondary schools; colleges and universities also have a role to play, concludes a new report by the Higher Education Quality Council of Ontario (HEQCO).

The report, *Improving Numeracy Skills of Postsecondary Students: What is the Way Forward?*, notes that several province-wide and international assessments have found that math and numeracy skills among Ontario students and adults are declining. In an [analysis](#) of results from the 2012 Programme for the International Assessment of Adult Competencies, Statistics Canada reported that 19.5% of Canadian-born university graduates between the ages of 25 and 29 scored at Level 2 or below on the assessment's numeracy component. The test includes five levels of proficiency.

A [pilot project](#) conducted by HEQCO aimed at measuring the literacy, numeracy and problem-solving skills of first- and final-year students at 19 Ontario colleges and universities found that roughly one-quarter of participating final-year students scored at Level 2 or below on the numeracy component.

These and other findings have raised concerns that students are arriving at Ontario colleges and universities without adequate fundamental math and numeracy skills, the report notes. Universities and colleges offer many initiatives aimed at improving students' math skills, often through math centres, remedial math courses and tutoring services. These programs are designed to help only select students, generally those enrolled in programs with math components, and they don't necessarily focus on numeracy skills. Whereas math involves thinking *about numbers* (including abstractions), numeracy is thinking *with numbers*, in true-life contexts.

Teaching numeracy has generally been viewed as the responsibility of the K-12 system, the report states. "However, we believe that this view is rooted in an outdated concept of numeracy that conflates numeracy with mathematics," the authors write. "Our understanding of numeracy has evolved. We know that numeracy is not merely a synonym for applied mathematical skills and that its proficiency requires habitual practice. And there is reason to worry that postsecondary students are out of practice."

To explore how postsecondary institutions can contribute to upgrading the numeracy skills of students, HEQCO together with the Fields Institute's Centre for Mathematics Education organized a workshop in December that brought together numeracy experts from government, universities,

colleges, and primary and secondary schools. The workshop was an important first step toward advancing numeracy education in Ontario's colleges and universities.

The report calls for a better assessment of postsecondary students' numeracy skills and for the development of new strategies to teach numeracy in college and university classrooms.

Improving Numeracy Skills of Postsecondary Students: What is the Way Forward? was written by Sarah Brumwell and Alexandra MacFarlane, Higher Education Quality Council of Ontario.