

Why are there few online programs in Canada's Far North?

[This has been amended form an original blog by Tony Bates at <http://wp.me/pi2SZ-2ZV>]



Canada's Far North Image: Wikipedia

What is north in Canada?

In a country as vast as Canada, 'north' is always relative. Sudbury (46° N) is considered to be in Northern Ontario, but by latitude it is south of Vancouver (49° N).

In terms of post-secondary education, there are about 20 Canadian colleges and universities in the range of 52° to 56°N, which would cover institutions in some fairly large cities and towns, such as Edmonton, Saskatoon, Fort St. John, Fort McMurray, Prince Rupert and Prince George, for instance, as well as several colleges with campuses in fairly small towns. These could all certainly claim to be in the north. But the far north is well beyond even these northerly habitations. In particular, we are interested in five institutions operating north of 56°, because they face unique challenges in providing post-secondary education.

Far North post-secondary institutions

There are four institutions with campuses in the far north:

- [Yukon College](#), Whitehorse, Yukon (60°N)
- [Collège Nordique Francophone](#), Yellowknife, Northwest Territories (62°N)
- [Aurora College](#), with campuses in Inuvik (68°N), Fort Smith (60°N) and Yellowknife (62°N), in the Northwest Territories
- [Nunavut Arctic College](#) (70°N), Nunavut

In addition, we would like to include the [University College of the North](#), which has a mandate to serve Northern Manitoba. Although its two main campuses are in The Pas (54°N) and Thompson (56°N), it also has centres in Churchill (59°N) and several other locations north of 56°.

One common feature of the colleges in the three territories is that the colleges offer some university-level courses, mainly at the bachelor's level, but as yet, there is no full university in any of the territories, although all five are members of the international [University of the Arctic](#), a cooperative network of universities, colleges, research institutes and other organizations concerned with education and research in and about the North.

The unique challenges of post-secondary education in the Far North

All five of these institutions face two common challenges, one geographical/demographic and the other historical/cultural.

Geography

The greatest challenge is that these institutions are responsible for providing post-secondary education to very small populations over vast territories and extreme weather conditions.

Nunavut

Nunavut Arctic College serves a total population of 33,000 spread across an area of just over 2 million square kilometres (about the same size as the whole of Mexico). Nunavut Arctic College has about 1,300 students, located in four campuses and 23 community learning centres spread across the whole territory. The Cambridge Bay campus is 1,700 kilometres, and two time zones, from the Iqaluit campus.

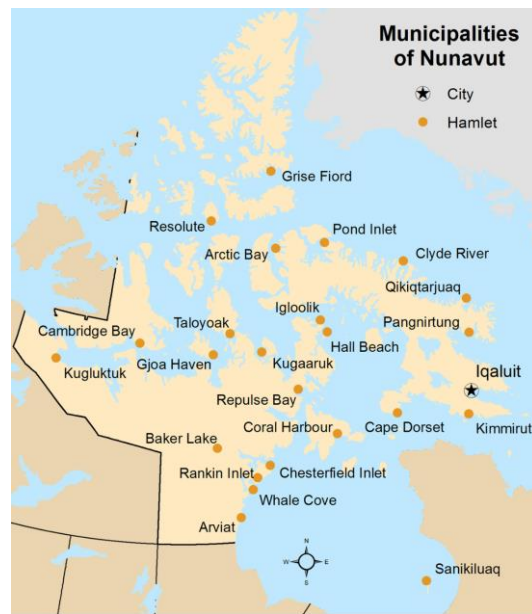
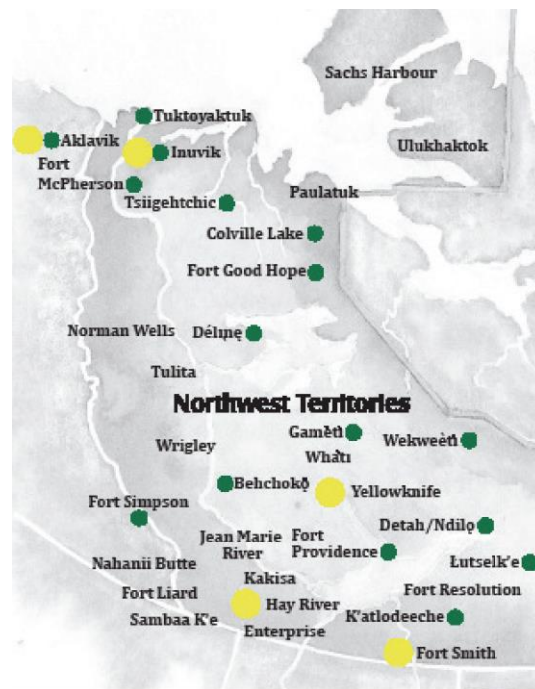


Image: Wikipedia

There are no roads or railway, of course, and flying is usually by charter plane and heavily dependent on weather conditions. Nunavut is a territory funded primarily by the Federal government of Canada, but it does have its own elected legislative assembly.

Northwest Territories

Aurora College serves a total population of just over 41,000 spread across an area of 1.34 million square kilometres in the Northwest Territories (about the same size as Columbia in South America). It has about 800 students taking post-secondary qualifications, with three campuses in Fort Smith, Yellowknife and Inuvik, and 23 learning centres across the province. Again, there are few direct roads between major towns within the territory - for instance it is 4,000 kilometres by road between Yellowknife and Inuvik, or two and a half days of non-stop driving - not recommended, even in summer. There is now an all-weather road all the way to Tuktoyaktuk from Vancouver. Nevertheless travelling between locations within the territories is still difficult and very expensive. The Northwest Territories is also funded by the federal Government of Canada, but has its own elected legislative assembly.



Aurora College campuses (yellow) and learning centres (green)

There is also a francophone college in the Northwest Territories, Collège Nordique Francophone, based in Yellowknife. It is relatively young, being founded in 2011, and has about 150 students.

Yukon

The Yukon is the smallest and most western of Canada's three federal territories, with a population of approximately 36,000 spread over an area of 480,000 square kilometres. The majority (25,000) live in Whitehorse, and another 1,500 or so in Dawson City, so the population is more compact than in the other territories. Yukon College has about 800 students taking post-secondary courses. Its main campus is in Whitehorse, with 12 regional campuses across the Yukon.



Northern Manitoba

Northern Manitoba was once part of the Northwest Territories, but was ceded to Manitoba in 1912. The University College of the North (UCN) serves an area of 438,000 square kilometres (more than 20 per cent larger than Germany), but with a total population of just under 90,000 inhabitants, of which more than 60 per cent are Aboriginal.



Campuses and regional centres of the University College of the North, Manitoba

The vast majority of the region is undeveloped wilderness and features long and extremely cold winters and brief, warm summers. The population is scattered across very small communities. The largest city is Thompson, with 13,000 people. In Churchill, polar bears roam the streets at certain times of the year, which seems to me to be a very good reason for studying at home. UCN has a total of just under 1,200 students a

year, with main campuses in The Pas and Thompson, and 12 community learning centres spread across northern Manitoba. UCN is funded by the province of Manitoba.

History and culture

The second major challenge for these institutions is historical and cultural. First of all, most of the territories have a majority of aboriginal people who historically have been neglected economically and educationally. The territories until very recently have been administered by the Canadian Federal government, which in general does not have a constitutional responsibility for education (elsewhere, this is the responsibility of the provinces). Thus there has not been the same level of expertise or indeed commitment in the past to education in the far North, which for a long time was left either to missionaries or traditional knowledge passed down from generation to generation by the aboriginal peoples.

One unfortunate consequence of this is that there is still a higher proportion of the population in these areas without high school qualifications. Increasing access to under-represented groups is a major challenge. Combined with the low density of population, post-secondary institutions have to manage very few students over huge areas, and cover a very wide range of educational provision, from adult basic education through to graduate level studies.

At the same time, and influenced by climate change, the territories in general are expanding economically, particularly in mining, so demand for post-secondary education and graduates is increasing.

Is online learning the solution?

Apparently not, and, as we shall see, for very good (or in fact very bad) reasons.

The two largest/most northerly territories have no online or distance learning, as far we can determine. Neither Aurora College nor Nunavut Arctic College offer online courses. Collège Nordique Francophone is very small and has just a handful of students taking at least one online course.

Yukon College (in the most compact of the territories) however has nearly 400 students taking at least one online course (45% of all their students) and 37% of all their course registrations are in online courses, way above the national average.

The University College of the North in Manitoba also has a much higher proportion of students taking at least one online course than the national average (55% compared with the national average of 17%), although a relatively small proportion of all course enrolments are in fully online courses (6%). In other words the UCN students are taking only one or two online courses in their program.

The delivery model for all five institutions is primarily based on distributed face-to-face learning centres. These are locally based. This does not mean of course that students in the far north can't get relevant online courses from other institutions further south, provided they have adequate Internet access. For instance Trent University in Southern Ontario offers an [online diploma in Circumpolar Studies](#).

There are two possible explanations for these findings.

Poor or non-existent Internet service

The first is that apart from the Yukon, there is very poor Internet service in the far north of Canada. For instance UCN's Churchill campus has only 2 MBS per second connection at the moment - that is equivalent to the old dial-up modems of the past. In the far north, the only Internet connection for most communities is

via satellite, which is very expensive, especially if a return uplink is used, as is really necessary for online learning.

This is less of a challenge in the Yukon, where a majority of students live in either Whitehorse or Dawson City, and where there are better internet services. However, for students in the other two territories and Northern Manitoba, their best or most economical chance of Internet access will be at a local centre or one of the main campuses.

There are [plans from the Federal government to increase Internet access in the far north](#). Almost \$50 million has been committed, with service from a dedicated circumpolar satellite, and Iqualuit may see a seabed fibre optic connection in the distant future. However, to date, these plans still have to be implemented, and in any case in many of the more remote communities in the far north Internet speed and capacity still will not be cheap enough for the consistency and quality of service needed for effective online learning.

Culture

The importance of learning within their own cultures with their own people is particularly important for many indigenous people. It is no surprise then that in our surveys of post-secondary institutions in Canada First Nations (aboriginal) institutions appear to be less inclined in general to offer online courses or programs. This is not to say that indigenous people cannot learn online, but for online learning to be more generally accepted, it needs to be designed to respect and build on aboriginal ways of learning. In fact, that might also benefit non-indigenous learners as well.

Important lessons

Online and distance learning is not primarily driven by distance, but by flexibility and low cost, high quality technology access. Thus online learning is more likely to thrive in more densely populated areas where there is access to affordable, high quality Internet services. In very remote regions, online learning will usually need to be supplemented or incorporated with local learning centres and local communities. Thus we should not underestimate the importance of low cost, high quality and easily accessible technology for online learning to succeed.

Nevertheless, economic and social development in the far north of Canada requires better quality education made accessible to everyone in the far north, building on the regional centres. However a major investment in Internet technology is still necessary in these areas because not everything can be delivered through local campuses, especially for the growing number of workers who need access to cultural and learning opportunities in the far north. For effective online learning that enables for full video interaction from the remotest communities, even greater levels of investment than those currently planned will be needed.