In 2003, the G8 Supplementary Courses program was created as a means to address the difficulties many aboriginal students experience in making the transition from grade eight to grade nine and to promote their computer literacy.

Background

In the winter of 2003, educators from Keewaytinook Internet High School (KiHS; www.kihs.knet.ca), a First Nations high school with campuses located in 13 isolated communities in Northern Ontario, and administrators from Keewaytinook Okimakanak (www.knet.ca) sought to address the academic shortcomings that many Aboriginal students experience upon entering high school in northern Ontario. Since the creation of KiHS in 2000, it became apparent that many grade eight students were not adequately prepared to participate in the grade nine curriculum, especially in the core subjects of science, math and English. A proposal was put forward to create a supplementary program that could help address this difficult transition. The KO Smart Communities Project provided the necessary funding and a pilot program was launched the following spring.

Fernando Oliveira, a high school teacher and e-learning developer who taught grade nine in Poplar Hill and Fort Severn First Nations, was hired to develop and facilitate an on-line supplementary science course for grade eight students in First Nations communities. This ten-week pilot course was designed to provide students with additional tools and knowledge that are recognised precursors to the grade nine curriculum expectations. These lessons were presented in an online environment that also promoted computer literacy.

Pilot Program Implementation

The pilot project, named the G8 Supplementary Courses Program (www.g8.firstnationsschools.ca), was launched on April 14, 2003 and involved eight First Nations communities. The administering teachers were given implementation materials and access to technical support to prepare their classrooms. Each class was required to reserve one hour per day of computer time so that students could participate in the program. Assignments were posted in weekly blocks and teachers were asked to print a hard copy of each lesson and supervise the local delivery. Students were required to complete four or five short lessons per week over the ten-week period. Lessons guided students through various articles, websites and experiments using their computers and science materials that were mailed to each classroom beforehand. Students were required to use a word processor (Microsoft Word or Corel WordPerfect) and a simple graphics editor (Microsoft Paint) to complete assignments and submit them to their teacher and course administrator as email attachments. The task of grading
assignments was shared between the course administrator and the local teachers. A password-protected grades report was published weekly for the teachers to assess their students’ progress. Email correspondence between the course administrator and the teachers was maintained throughout the course and all participants were encouraged to provide feedback once the course had ended by completing a short survey.

**Pilot Program Results**

There was general agreement among teachers and students that the pilot program was very successful. Survey results revealed that both groups were quite open and eager to incorporate e-learning into their regular classroom activities. The full survey results of this pilot course may be accessed at [www.g8.firstnationschools.ca/feedback.html](http://www.g8.firstnationschools.ca/feedback.html).

While an increasing number of First Nations elementary schools are acquiring computer labs with high speed Internet access, many of these computers are often under-utilized. A general lack of experience in incorporating online educational tools, combined with heavy workloads and the time necessary to create meaningful e-learning experiences, has inhibited many teachers from fully utilizing this resource. For some teachers, the G8 Pilot Program not only enriched the learning of their students; it also served as a personal initiation into practical e-learning methods and resources.

**The Full Program**

In September 2003, following the success of the pilot program, the G8 Program was sponsored by Keewaytinook Okimakanak (Northern Chiefs) and made available under the umbrella of Industry Canada's First Nation SchoolNet Program ([www.firstnationschools.ca](http://www.firstnationschools.ca)) and the Ontario Regional Management Organization. During the 2003/04 school year, the G8 Program ran three courses within a three-term framework:

<table>
<thead>
<tr>
<th>Term</th>
<th>Course</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Science</td>
<td>October 20, 2003 to December 19, 2003</td>
</tr>
<tr>
<td>2</td>
<td>Math</td>
<td>January 19, 2004 to March 22, 2004</td>
</tr>
<tr>
<td>3</td>
<td>English Literacy</td>
<td>April 26, 2004 to June 20, 2004</td>
</tr>
</tbody>
</table>

Survey results for all courses are available at this address: [www.g8.firstnationschools.ca/feedback.html](http://www.g8.firstnationschools.ca/feedback.html)

**Implementation**

Prior to the start of each term, every First Nation elementary school in Ontario received an invitation to participate in the program. A number of communities expressed a desire to sign on, but were unable to do so due to a lack of resources (technology related), staff shortages or scheduling conflicts. Overall interest was quite high, however, and registration remained strong throughout the school year. At the end of each registration period, teachers were sent participation guidelines and asked to ensure that their school computers were up to date and contained the necessary software. While each course contained a “suggested schedule”, care
was taken to make participation as flexible as possible to account for local holidays, school trips and community events, as well as the varying academic ability amongst classrooms and individual students. Whenever possible, effort was made to offer teachers a resource that could work around their schedule. At all times teachers were encouraged to take ownership of the program. While many teachers followed the schedule associated with each course, some chose to omit certain lessons and others opted to follow their own timeline. Allowing schools to register on a course-by-course basis also allowed for greater local flexibility. Teachers were encouraged to pick and choose the courses that best fit their needs. Consequently, different schools participated at different times. In total the G8 Program served 27 schools in First Nation communities during the 2003/04 school year.

1. Poplar Hill
2. Long Lac
3. Fort Severn
4. Neskantaga
5. Wapekeka
6. Big Trout Lake
7. Temagami
8. Keewaywin
9. Northwest Angle #37
10. Muskrat Dam
11. Slate Falls
12. Peewanuk
13. Cape Croker
14. Bearskin Lake
15. Shoal Lake #40
16. Whitedog
17. Sandy Lake
18. Beausoleil
19. Deer Lake
20. Fort Albany
21. North Spirit Lake
22. Onigaming
23. Wabigoon Lake
24. Wapekeka
25. Aroland
26. Mattagami
Terms 1 and 2: Science and Math

The science and math courses were delivered much in the same manner as the pilot program, with the exception that another teacher was hired on a part-time basis to help deal with the increased workload. Participation followed a straightforward format, with teachers directing their students to online materials and assignments and students forwarding their work through email correspondence. While survey results continued to reveal general approval and appreciation for the program, there was also a growing sense that a more robust online learning environment would allow for better utilization of the technology amongst users (both teachers and students) as they grew more comfortable with the e-learning process.

Development of a New Online Platform

With the second term underway, various online e-learning environments were researched with an eye to incorporate a system that would do the following:

1. Automate various administrative functions (grading reports, teacher feedback, quizzes, announcements, etc.).
2. Promote collaborative learning between students in different communities.
3. Allow students to interact with each other through the use of guided discussion areas.
4. Promote a sense of community among teachers and students.
5. Act as a safe area accessible only by registered students and teachers.

In general, most e-learning platforms provide teachers and students with the above-mentioned functionality in an environment that emulates the one-teacher/one-classroom structure. However, the unique nature of the G8 Program requires a split-level structure that allows students and teachers from different communities to participate as a large group while separating administrative functions for individual schools. This division is necessary to ensure that student grades, teacher feedback, journal entries and other private information that pertain solely to an individual student, teacher or classroom can only be accessible by the appropriate participants. The Moodle platform (www.moodle.org), an open source program built around a social constructionist pedagogy (see www.moodle.org/doc/?file=philosophy.html for more information) was selected and customized to fit the specific needs of the G8 Program. Please see the next page for a screenshot of this platform. A functional demonstration site may be accessed via the main G8 program webpage (www.g8.firstnationschools.ca).
Term 3: English Literacy Course Takes on a New Environment

The new online platform was completed in time for the English Literacy course in term three. This change proved to be very popular among teachers and students alike. The interactive elements of this new program encouraged students to make themselves known to participants from other communities and to learn about each other through their personal profiles. The casual message area, which contained discussion themes such as “The Great Outdoors” and “Now That’s Funny”, enabled students to communicate with each other while an online “Creative Writing Challenge” provided a vehicle for students to share their poetry and stories. As a number of students stated in their survey responses, the ability to interact with other students made the course more enjoyable:

Student Survey Excerpts:

| Student 1: | …I liked the different things that you can do and you can meet lots of new people. |
| Student 2: | I had fun in this course, met some new students and learned some new things. |
| Student 3: | Looking at other people’s poems and looking at their logos was kind of cool. |

Teachers also found the enhanced online environment to be beneficial, both in connecting students with each other and creating a sense of newness and excitement into their learning experiences.

Teacher Survey Excerpts:

| Teacher 1: | I think my students really enjoyed the forums. They gave them an opportunity to talk/write about some of the things that we try to incorporate into the class every morning (e.g., current events, opinions, etc.). It was great to see the students conversing back and forth, especially with people they don’t even know. Most importantly, it was great to read all the positive comments and encouraging messages being given by the students in the course to their peers about their creative writing. No matter how often we say that someone has done a great job, I think it’s best received when given by a peer. |
| Teacher 2: | It was refreshing to see our students so excited about a school program. I think the combination of games, videos and personal profiles, along with the regular assignments, made the program effective and enjoyable. Computer skills are way up. Thanks for bringing something new into our classroom. |
| Teacher 3: | Overall, this was an excellent experience for my students. I noticed that many were more motivated, attended more regularly, and made more of an effort than they normally would have. |
Recommendations:

- A conscious effort was made to create lessons that reflect the lifestyle in isolated First Nation communities (snowmobiles and four-wheelers rather than subways and trains, band councils and local stores rather than big government and shopping malls, etc.). After reviewing the lessons created thus far, it has become apparent that new approaches and resources could be pursued to increase the relevancy within current and future courses. While it is important to acknowledge that there is tremendous diversity between First Nation communities and students themselves, and that there is no single formula for developing curriculum that fits the needs of all Aboriginal students, there is a need to research existing publications and consult seasoned First Nation educators in order to establish guiding educational principals that highlight Aboriginal customs and ways of learning. Such a document would also be a great resource for teachers in First Nations schools at large.

- A few teachers expressed the desire to extend the G8 Program to grade seven students. Such a step would not only allow students to get a earlier start and establish a greater sense of continuity within the program; it would also address the reality that many First Nation schools have split-grade classrooms. As the school year comes to an end, there is an opportunity to explore the feasibility of adding some sort of grade seven program.

- The new e-learning platform that was introduced in term three proved to be a great success. As we look back on our experiences with this new environment, we realize can make this platform even more effective. The summer holidays present an opportunity to make further additions/modifications before the courses resume in September.

- The success of our new e-learning platform and the G8 Program format presents an opportunity to use this delivery system to create and deliver other online resources to First Nation schools. In particular, this system may be an ideal way of developing and delivering a Native language resource. Input from Native language teachers, and others with an involvement in this field, would be an ideal first step toward this goal.

- Apart from the regular courses, which run for a predetermined number of weeks, teachers in First Nation schools may benefit from a permanent online area where they could share resources, lessons and best practices.

- There is a need to identify additional funding and possible sponsoring partnerships, including Indian and Northern Affairs Canada, to support the continued operation and delivery of this service.

Conclusion

The education gap between aboriginal and non-aboriginal students has been the subject of considerable attention in recent years. While high schools such as KiHS have taken advantage of broadband connectivity to help address this gap, initiatives at the elementary school level are still relatively few. The success of the G8 Program has demonstrated the need and opportunity to use the Internet to bolster the skills, knowledge and self-confidence of students in First Nations elementary schools. As we continue to explore this opportunity and develop new inroads, we look forward to the input of educators, councillors, administrators, elders and others who have an interest in helping Aboriginal students succeed in high school.