



# CAREER PATHWAYS PROGRAM

## 2005 COMPUTERWORLD HONORS CASE STUDY

### EDUCATION & ACADEMIA

THE ABORIGINAL PATHWAYS PROJECT HELPS IMPROVE THE HIGH SCHOOL COMPLETION RATE OF CHILDREN LIVING ON ABORIGINAL RESERVES IN ALBERTA, CANADA, THROUGH THE USE OF DISTANCE LEARNING TECHNOLOGIES. [20055295]

*A Search for New Horizons*



### SUMMARY

The goal of the Aboriginal Pathways project is to increase the high school completion rate of children living on aboriginal reserves in Alberta, Canada, through the use of distance learning technologies, better preparing them for employment opportunities as adults and improving the quality of life in rural communities.

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### APPLICATION

The many oil and gas companies that operate in rural Alberta, Canada, require that all of their employees have a minimum of Grade XII education. This qualification severely limits residents of aboriginal reserves from accessing the employment opportunities these companies have to offer. Those community members without Grade XII are consigned to welfare and government handouts.

Aboriginal students do not drop out of provincial high schools because they lack the academic ability to succeed. Rather, they drop out because of the pressures of growing up; the intergenerational effects of residential schools; racism and cultural conflict; student/staff relations; marginalization; alienation; and systemic labeling. In order for aboriginal students to be successful, they must have access to a quality teaching and learning environment on the reserve.

As part of the Career Pathways Program developed and managed by Southern Alberta Institute of Technology (SAIT), the Aboriginal Pathways project was created to increase the high school completion rate of aboriginal children through the use of distance learning technologies, leveraging the Alberta SuperNet, a high-speed, broadband network linking provincial government facilities, schools, healthcare facilities, and libraries in 422 Alberta communities.

Over the past four years, the Aboriginal Pathways project has successfully and dramatically increased the number of students staying in school or returning to school to get their diplomas, raised the high school graduation rate, increased the number of individuals receiving highly paid jobs on or near their traditional homes, and visibly improved the quality of life in these communities.

### BENEFITS

The Aboriginal Pathways program has clearly had a positive impact on not only the students who have received their high school diplomas and acquired good-paying jobs with local oil and gas companies, but on their communities as a whole. Aboriginal communities participating in the Pathways program take pride in their communities and their culture, which is encouraged and promoted in the Pathways program. The difference is readily apparent, exemplified by a reduction of crime, social dysfunction, and poverty.

Oil companies have also benefited from the expanded pool of educated, qualified employees now available locally.

The Province of Alberta and all of its citizens have benefited from the Aboriginal Pathways program through the reduction of welfare payments that would have otherwise been made to unemployed or underemployed members of the aboriginal communities.

### IMPORTANCE

Distance learning technology is essential to the success of the Aboriginal Pathways program. The Sunchild reserve, the first community served by the Aboriginal Pathways program, like most of the other 18

communities currently participating in the program, is located in a rural area. The Sunchild reserve covers 12,894 acres and is home to 322 aboriginal people. Educational facilities and teaching resources in such rural areas are limited. Teachers sent to teach in aboriginal communities are ill prepared for the task and often leave midway through their first school year. The alternative for students is living off the reserve to attend a school in a more urban setting. Away from their family, friends, and familiar surroundings, students find little support, encouragement, or supervision and generally do poorly in school. Dropout rates are very high.

The government of Alberta created the Alberta SuperNet, a high-speed, high-capacity network linking approximately 4700 provincial government facilities, schools, healthcare facilities, and libraries in 422 Alberta communities, including aboriginal communities. It's an electronic highway that lets government, educators, and health caregivers share and deliver information and services province-wide, and faster than ever before.

The technology allows students to remain in their local communities and participate in school under the watchful and caring eye of a member of the community who ensures that students are attending classes, are on line, and are completing assignments. Through technology, students can access the most qualified instructors. While the technology is important, human interaction is equally important. The person within the community overseeing the program is the secret to success.

## **ORIGINALITY**

An old adage says that, "There is nothing new in education that has not been tried and failed." The use of distance learning is not unique, but there are a number of aspects of the Aboriginal Pathways program that are new. The participation and sponsorship of a post-secondary institution like SAIC in a program for high school students is unusual.

The use of a member of the local community to monitor distance-learning students is also uncommon. And the program managers only work with communities whose local leaders agree to fully support the initiative.

One additional feature makes this program stand out. Since the beginning of the program, desktop PCs were the device of choice in the schools. Some discussion had taken place regarding the use of laptops. However, it was felt that these highly portable devices might be stolen from children as they traveled between their home and school. Based on a study conducted in New York, Pathways managers reconsidered. Children are now beginning to receive laptops and are encouraged to take them home and connect to the Internet. The unpublicized objective is to allow the student's mother and father to surf the Web as well.

## **SUCCESS**

The Aboriginal Pathways project has proven very successful. The program covers 19 different aboriginal communities presently, representing between 700 and 800 students. By the fall of 2005, the program will expand to nearly 40 communities including communities in Alberta and Saskatchewan. In Sunchild reserve, the first Aboriginal Pathways community, the high school graduation rate has increased from 17 percent to 80 percent in four years. In fact, more aboriginal students have graduated in the last four years than in the previous 40 years. Another Pathways community has graduated 100 percent of its students.

In addition, increased numbers of students are staying in school or returning to school to get their high school diplomas. And most importantly, graduates are applying for and getting highly paid jobs on or near their traditional homes. What's more, graduates are registering for post-secondary distance learning programs with a view to stay on the reserve and work for the many oil and gas companies and gas plants nearby.

Incomes from jobs are having a discernable impact on the communities. Without a high school diploma, aboriginals can expect to earn \$70,000 to \$80,000 over their lifetime working within the community. With a diploma, they can expect to earn \$500,000 to \$600,000 with oil and gas companies in the area. And with a degree, that figure can climb to \$800,000 to \$900,000. A portion of that income is being reinvested in the community, improving the lives of everyone.

This spring (2005), with the assistance of "thin client server" technology, the Pathways partnership will be expanded to offer post-secondary services and programs to Sunchild and other remote Aboriginal communities. The thin-client server technology does not require the schools that are connected to the Alberta SuperNet to have servers and other associated hardware located on their site. Their costs are dramatically reduced, as all they have to provide are computer terminals for the students. Students will have access to Southern Alberta Institute of Technology's upgrading courses and to the first semester core courses (English, calculus, physics, chemistry and computers). Students will be able to complete their first semester and/or their first year of Architectural Technologies, Power Engineering, and Gas Process Operator diplomas in the security of their own communities.

## **DIFFICULTY**

Technology was not a significant barrier to the success of the Aboriginal Pathways program. The basic configuration in each community consists of a server connected to the SuperNet with PCs connected to the server. A bigger challenge was funding that technology infrastructure, which requires the commitment and participation of corporate partners such as the oil and gas companies who stand to benefit from the newly educated labor force.

The program faced other non-technical challenges. To succeed, the Chief and Council of each aboriginal community had to align around education, and the community had to see education as a positive reward, as well as accept the technology. Traditional reluctance to outside agencies had to be overcome by building a level of trust with the community. Finding the right Director of Education in each community was also critical.