



Case Study December 2002

Employee Literacy and Learning in the Workplace Suncor Energy Inc.

The Education and Learning case studies examine outstanding education and lifelong programs and initiatives. This case study addresses workplace literacy.

OVERVIEW

Being a world leader in mining and extracting crude oil from the vast oil sands deposits of northern Alberta is no easy business. It takes a tremendous amount of initiative, dedication, and focused determination. Suncor Energy's success over the past 35 years has been built on the growth of independent, integrated businesses that provide its 3,300 employees with a workplace that is challenging, stimulating, and fair and gives the employees opportunities to grow and succeed.

Suncor's core values and beliefs encourage corporate success as well as personal growth; personal growth and corporate success go hand in hand. Open and honest

communication among all staff is encouraged and fosters a climate of trust. Relationships between Suncor and its unions and employee associations flourish on a mutually beneficial basis. Employees are given the latitude to make decisions, take calculated risks, learn from their mistakes, and put ideas to work. They are encouraged to take charge of their own learning, and their accomplishments are recognized and rewarded.

Effective practices case study in providing training and supporting workplace learning

Name of Program
Mine Operations Program

Date Established
1999

Skills Developed

- A broad foundation of technical skills

- Employability skills—including teamwork, communication, and problem solving
- Grade 12 or General Equivalency Degree (GED)

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By supporting the training and development needs of employees—and promoting from within—the company has created a workplace where commitment is freely given and employees have a strong desire to exceed expectations and ultimately outperform the competition.

Suncor Energy Inc. is an integrated energy company that mines and extracts crude oil from the oil sands deposits of northern Alberta. Suncor also explores for, develops, and markets natural gas and petroleum-based products and is actively involved in the development of alternative and renewable energy sources. With approximately 3,300 employees across Canada, Suncor believes that the ideal workplace is a challenging, stimulating, and fair one—a place where all employees are given the opportunity to grow and accomplish their goals.

THE PROGRAM

Suncor requires workers who can handle current job duties and have sufficient skills, knowledge, and motivation to progress to other occupations and jobs within the company. At a minimum, it requires workers who can add to production and shareholder value, work in a safe and cooperative environment, and comply with regulations. Acquiring and keeping such workers is no easy undertaking—and with an ageing workforce and an industry-wide expansion on the near horizon, the need for a structured and reliable assessment, recruitment, and training process became urgent.

The Mine Operations Program—sponsored by the Suncor Energy Foundation and delivered through Keyano College—was the oil sands industry response. With thousands of resumés received over the Internet for jobs posted and with numerous job applicants travelling to Fort McMurray for employment each year, the Mine Operations Program assesses, trains, and credentials a large number of graduates to industry standards so that they can take on entry-level positions.

TARGET GROUPS

- Mining Heavy Equipment Operator hires.

ACTIVITIES

The Mine Operations Program offers entry-level candidates a range of theoretical and cooperative training placements that give the students a broad foundation of technical skills in:

- equipment fundamentals;

- maintenance and operation;
- workplace safety;
- employability skills;
- computer and business literacy (e.g., GPS and computer systems are used in all of the heavy haulers and shovels);
- oil sands mining and processing operations; and
- working in a shift-work environment.

DIFFERENTIATED APTITUDE TESTING

To be accepted into the program, candidates must first go through an interview and differentiated aptitude testing (DAT) process. Out of a pool of hundreds of applicants, the top 24 candidates—whose attitudes and aptitudes best match those required by Suncor and other players in the oil sands industry—receive 10 months of intensive training. Eight months are spent at Keyano College, where, in addition to theoretical and technical skills and knowledge gained through texts, lectures, and group work, students receive advanced training on state-of-the-art heavy hauler and shovel simulators. Suncor purchased the simulators for Keyano College and views this as a necessary and wise business decision, as the alternative would be for students to practise their driving, hauling, and shovelling skills on half-million dollar pieces of equipment. A further two months of training is devoted to a co-op term, where students job-shadow Suncor employees and gain real-world experience, knowledge, and skills in a range of job functions and activities.

TOWES

In the case of Suncor, students who are nearing completion of the Mine Operations Program must pass a customized critical workplace skills test—the Test of Workplace Essential Skills (TOWES). TOWES—an initiative of Bow Valley College in partnership with SkillPlan BC—uses authentic workplace documents and recreated tasks as source materials to accurately assess the student's grasp of the literacy skills required by front-line employees to complete daily tasks. A unique aspect of TOWES is that it exists as a bank of test items that can be configured into a variety of different tests. Currently, the TOWES inventory includes approximately 200 test items. For the Suncor version, the custom design feature is the inclusion of new test items using authentic Suncor documents.

Essential skills are measured in three literacy domains: reading text—memos, manuals, and reports; using documents—lists, forms, tables, graphs, charts, drawings, and maps; and numeracy—measurement/conversions, data analysis, estimation, and calculation. TOWES has been extensively field tested by more than 4,000 adult Canadians and provides fair and equitable testing of workplace literacy skills.

RESOURCES

In order for the Mine Operations Program to succeed, there must be a strong partnership in place between industry, labour, and education. Specifically, Suncor, Keyano College, and Bow Valley College/SkillPlan must work together to ensure that the proper training and assessment programs are developed and delivered.

Other required resources include:

- a 10-month custom-designed course, including classroom work and hands-on experiential learning opportunities;
- assessment processes, including essential skills profiles, a test bank of materials and tasks, and in-service test administrators to conduct and score the TOWES;
- custom-designed simulators for students to learn how to operate heavy hauler equipment, loaders, and shovels; and
- a co-op program, including mentors and a pool of employees willing to be job-shadowed.

INNOVATIONS

The Mine Operations Program is the only one of its kind in Canada. It provides custom-designed training in the specific skills and knowledge required by the oil sands sector—not just Suncor’s needs—and was developed by a consortium of oil sands players, including Suncor Energy Inc., Syncrude Canada Ltd., and Albian Sands Energy Inc.

- The partnership between the oil sands companies, Bow Valley College/SkillPlan and Keyano College is unique for a workforce development program.
- As part of the Mine Operations Program, Suncor outsources its recruitment function to Keyano College. In particular, Keyano College processes resumés, manages and delivers TOWES, and offers grade 12 or GED programs and testing—both locally and nationally.

- Through Suncor’s diversity standards initiative, the Mine Operations Program initiated a customized Aboriginal program made up of First Nations and Metis students.
- TOWES is one of the only assessment tools on the market that uses authentic documents to measure an individual’s skills against the requirements of an occupation.

BARRIERS

- Costs of the program are approximately \$4,000 per student.
- The testing and assessment tools used in the Mine Operations Program require upgrading on an as-needed basis: constant monitoring of Suncor’s needs, as well as upgrading of assessment documents and materials, is imperative.
- Because enrolment in the Mine Operations Program is limited to 24 people, the demand for graduates far outweighs the supply.

SOLUTIONS/KEYS TO SUCCESS

- The Mine Operations Program is a unique, customized training program that is developed to meet the standards, interests, and needs of the oil sands industry.
- The workers’ unions are big supporters of the program, as shown by their participation on the program’s advisory board.
- Suncor is willing to work with employees and potential new hires who show aptitude and want to improve themselves.
- The program offers training and development, along with precise, fair, and equitable assessment.

OUTCOMES

- Suncor is assured that students graduating from the Mine Operations Program have the skills, knowledge, attitude, and aptitude needed to function at a high level and that they are ready for training on trucks.
- Employees taking the Mine Operations Program are up-to-date on the latest Alberta Mine Safety Association (AMSA) standards, loss-control management techniques, and stress management practices—essential and critical knowledge when working in the oil sands industry.

IMPACTS AND BENEFITS

- Of the Mine Operations Program's current pool of 140 graduates, approximately 74 work at Suncor.
- Mine Operations Program graduates are well-rounded employees who have good attitudes and a strong work ethic.
- Two recent graduates of the program have successfully moved to more technically challenging jobs.
- Suncor has a better-trained and more highly skilled workforce than it would have had without the program.

USE AS A MODEL

The Mine Operations Program is a unique employment program designed to meet the specific needs of the oil sands industry. Although the program content and process cannot be used in other sectors, the underlying

principles and practices of designing training programs to the very specific requirements of entry-level positions within a company or industry sector are replicable. A company interested in hiring individuals who can handle current job duties, who show aptitude and a positive attitude towards progress and growth, who add value to production and to shareholder investment, and who work safely and comply with regulations should be interested in the fundamentals of the Mine Operations Program. Up-front investments in the skills and knowledge of current employees and potential hires pay great dividends.

Our thanks to the people we interviewed and others who provided comment, including:

Conrad Murphy, Bow Valley College
Dwight Jensen, Keyano College
Greg Hundseth, Suncor Energy Inc.

About the Educational and Learning Case Studies

The Education and Learning case studies examine outstanding education and learning programs and initiatives. The case studies provide in-depth analysis of the methods used to develop, assess, implement, and deliver education and lifelong learning in schools, colleges, universities, workplaces, and communities. They focus on goals, activities, resource requirements, achievements and outcomes, benefits, innovations, and keys to success and challenges.

This case study is one of a series addressing workplace literacy and basic skills development. The series is part of the *Overcoming Barriers* research project on workplace literacy being undertaken by The Conference Board of Canada and funded by the National Literacy Secretariat, Human Resources Development Canada.

Employee Literacy and Learning in the Workplace: Suncor Energy Inc.
by *Douglas Watt*

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Printed in Canada • All rights reserved • ISSN 0827-1070
ISBN 0-8873-572-5 • Agreement No. 40063028
*Incorporated as AERIC Inc.

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