



The Conference Board
of Canada

CASE STUDY 35

*Building a Global
Community Through
the Use of Technology
in the Classroom*

Program
Workplace

Date Established
1998

Contact

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Name of Program
The Learning Centre

Skills Developed
*Fundamental
Personal Management
Teamwork*

Effective practices in encouraging and supporting
workplace learning

COMINCO LTD.'S LEARNING CENTRE

*Refreshing and Extending Learning and
Building an Engaged Workforce
Winner, Award for Excellence in Workplace
Literacy, 2000, Large Business Category*

BY KURTIS KITAGAWA

January 2001

Cominco Ltd. has always helped its employees respond to changes in industrial processes through job-related training. But in the last few years, pressed by the realities of doing business in today's change-driven culture, Cominco has embraced a much broader approach to workplace education, focusing on employees in a more holistic way. Cominco believes that supporting broader, employee-driven learning—in addition to employer-driven, job-specific training—builds an engaged workforce, one that is more self-confident, personally satisfied and flexible in addressing inevitable workplace change.

Overview

Cominco Ltd. is a Vancouver-based natural resource company whose principal activities include mineral exploration, mining, smelting and refining. It is Canada's oldest continually operating mining company. Cominco's principal metallurgical complex is located in Trail,

B.C., and is the world's largest integrated zinc and lead refining and smelting complex. Trail Operations covers 485 acres and consists of 20 operating plants. In addition to refined zinc and lead, a number of co-products are produced, including silver, gold, cadmium, bismuth, indium, germanium, copper sulphate, copper arsenate, sodium antimonate, low alpha lead, antimonial lead, arsenial lead and ferrous granules. As part of pollution control measures at the smelter, Trail Operations produces sulphur, sulphuric acid, sulphur dioxide and granulated and crystallized ammonium sulphate fertilizer. Cominco has been operating for almost 100 years at its Trail site, and the diversity of its products is a testament to the company's adaptability over time and its success in converting a wide range of co-products into value-added, marketable commodities.

Cominco's ongoing success is a function of the resourcefulness and adaptability of its people, the company's innovative management and continuous improvement of its industrial processes

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over time. People and process are both key terms in the success equation. Cominco's refining and smelting processes are constantly changing to keep pace with technological innovation and the efficiencies and opportunities new technologies offer. But it is people who anticipate, respond to and manage that change process, and Cominco supports workplace change for its employees by preparing them with the job-specific skills and generic competencies they need to drive the company's success.

Cominco Ltd. has always helped its employees respond to changes in industrial processes through job-related training. But in the last few years, pressed by the realities of doing business in today's change-driven culture, Cominco has embraced a much broader approach to workplace education, focusing on employees in a more holistic way. Cominco believes that supporting broader, employee-driven learning—in addition to employer-driven, job-specific training—builds an engaged workforce, one that is more self-confident, personally satisfied and flexible in addressing inevitable workplace change.

Cominco's Trail Operations employs 1,800 people whose work is organized into 15 different shifts that span the 24-hour-per-day, seven-day-per-week production schedule. Two locals of the United Steelworkers of America represent more than 1,600 of the Operations' employees. Trail Operations, like many other Canadian workplaces, employs an ageing workforce, with the average age being 47 years. In addition, most employees have given long service to Cominco and on average have 22 years of experience on which to draw.

All these features of Cominco's workforce need to be borne in mind when reading this case study: employees tend to be highly experienced, unionized, ageing shift workers who have contributed to the company's success and have much to offer.

Background

The Learning Centre at Trail was established in 1998 and is open to all employees at Trail Operations: United Steelworkers of America locals 480 and 9705 as well as Cominco staff. The following is a brief history of the origins of Cominco's highly popular and effective Learning Centre.

Questionnaire data resulting from an employer-paid core technical course identified long-suspected basic workplace skills needs at Trail Operations. In late 1996, ABC Canada gave presentations on the implementation of a basic workplace skills program to both senior management and senior union local personnel. Having identified a need for, and a strong interest in, basic skills education at Trail on the part of Cominco employees, management and union representatives endorsed the decision to proceed with an organizational needs assessment. The employee interest in general workplace skills education was clear, but to be successful the program needed to be defined through an organizational needs analysis to clearly identify what employees experience as their basic education needs.

The Process

Step 1. Building Ownership from the Beginning

In early 1997, a committee was formed with equal representation from management and union. The committee, calling itself the Refresh Education and Learning Committee (REAL), had the task of guiding a process to determine the basic skills education priorities of Cominco's workforce.

Step 2. Canvassing the Employees

In May 1997, REAL worked with Trail Operations employees in small focus groups to identify and prioritize employees' learning needs and seek guidance on the most effective way to deliver the education programming requested by employees. A total of 139 employees came forward voluntarily and participated in the various focus group discussions.

Employees recognize that even if they are not currently using a computer on the job, they soon will be and want to be prepared.

Employees need to know “how math equations work” and need their math skills to be “flexible” so they can apply them in “many different applications and problem-solving situations.”

Employees recognize that “people have to think—not just push buttons. You need learning and foundation skills to be empowered.”

In their focus groups, employees were asked to describe their learning needs in the areas of reading, writing, math, oral communication, basic science and basic computer skills. Participating employees rank-ordered their learning priorities as follows:

1. Basic computer skills
2. Reading comprehension
3. Math
4. Writing
5. Science
6. Oral communication

Employees recognized that even if they were not currently using a computer on the job, they soon would be and wanted to be prepared because, as they said, “people with computer literacy will have a better chance for advancement and more interesting jobs.”

With regard to reading comprehension, many employees felt they read more slowly than they would like or found they had to read something several times to really understand it. Employees who viewed reading comprehension as a need area wanted to improve their reading speed and comprehension to avoid, as one employee put it, having to “read something in the paper two or three times.”

Many employees rated math as an educational priority as well, a priority that was all the more pressing since their work involves metric conversions, measuring weights and volumes and using formulas. As one employee observed: employees need to know “how math equations work” and need their math skills to be “flexible” so they can apply them in “many different applications and problem-solving situations.”

Cominco employees welcomed a writing refresher as a vehicle to help them translate their ideas from their heads to paper, be more organized in their writing and improve their spelling. According to one employee, when you cannot spell the words you want to use, you “don’t use them.”

Science is at the very heart of the work employees do at Cominco, and most employees who participated in the focus groups saw the value of having a good understanding of basic science principles so they could see the “whole process illustrated.”

Employees identified oral communication as a skill that everyone needs on the job and that is also helpful to them at home. Refreshing verbal skills was therefore important to them because, as everyone has experienced at one time or another, “sometimes you know what you want to say but [find that] to articulate it clearly is hard.”

Employees who participated in the focus groups also expressed their commitment to lifelong learning as a means of helping them manage change: “People have to think—not just push buttons. You need learning and foundation skills to be empowered.”

Finally, employees voiced preferences about the most convenient times, location and model of delivery of workplace learning activities. Employees favoured a drop-in style learning centre that operated in the fall, winter and spring. Such a centre would:

- ✓ fit well with their shift work schedules—a lack of access to off-site learning opportunities had been a barrier to further education for many employees as local businesses and educational institutions offer courses catering only to people on a “five and two” (five days on and two days off) schedule and not a typical shift worker’s schedule
- ✓ enable employees to choose which skills they wanted to focus on and the learning context (i.e., a subject that engaged them) in which they wanted to develop these skills
- ✓ enable them to work at their own pace
- ✓ provide the flexibility of learning with a tutor, in small groups, by computer or by correspondence, depending on their needs
- ✓ enable employees to keep their learning private if they wanted

The Learning Centre offers employees their own learning, their own way and absolutely free.

Step 3. Making Recommendations

In June 1997, the REAL Committee made recommendations to Cominco for a learning centre pilot based on the needs assessment findings. Among other things, the Committee recommended that Cominco:

- ✓ establish a learning centre to deliver the kinds of programs employees wanted
- ✓ research the costs and establish a budget to support learning in this learning centre
- ✓ create a plan to evaluate the performance of the learning centre
- ✓ continue to communicate with employees and Cominco about the REAL initiative
- ✓ maintain a REAL Committee to oversee employee learning activities at the learning centre

Step 4. Parking Politics at the Door

In April 1998, Cominco and the United Steelworkers of America Local 480 developed and signed a letter of agreement acknowledging that the success of The Learning Centre depended on the full and unwavering support of both union and management and designating The Learning Centre as a politically neutral site. That is, "Cominco and the Union agree that they will continue to support the Committee and The Learning Centre...irrespective of any disputes or arguments between Cominco and the Union which may arise from time to time, excluding legal strikes."

Step 5. Approving Funding and Implementing a Communications Strategy

In March/April 1998, Cominco approved a funding plan for The Learning Centre, which would see the employer bear the total cost of employee-driven, non-work-related learning activities for Cominco employees—their own learning, their own way, where and when they wanted it and absolutely free. The REAL Committee then set to work on communicating this message to employees.

Step 6. Opening the Doors of The Learning Centre—Putting a Learning Philosophy into Action

In September 1998, The Learning Centre opened its doors for business. The Learning Centre:

- ✓ is located on site
- ✓ offers only courses suggested by employees
- ✓ supports individual growth and development through learning unrelated to the job
- ✓ enhances the quality of life of employees and helps them fulfil their educational goals
- ✓ keeps information relating to employee learning confidential (i.e., separate from their human resource records)

Objectives

- Provides employees with opportunities to refresh and acquire learning
- Enhances skills in a positive, safe and convenient setting
- Creates and supports a culture of learning

Targeted Groups

- All Cominco employees—union and management

Learning Activities

Learners have requested a wide range of courses at The Learning Centre including:

- ✓ courses with an explicit academic focus (e.g., technical writing, effective reading, support for completion of Grade 12)
- ✓ computer courses (e.g., How to Buy a Computer, introductions to computing, Microsoft Word, spreadsheets, the Internet, keyboarding)
- ✓ courses with an implicit academic focus (e.g., Boat Pro, photography, stained glass)

Explicit academic courses appeal to the confident learner, while short (three-hour) introductory computer courses give other learners the opportunity to have successful learning experiences and gain valuable skills and confidence.

The Learning Centre's innovation lies in recognizing that people can develop skills that are transferable to the workplace while learning about topics that interest them and relate to other parts of their lives.

Implicit academic courses model The Learning Centre's innovative approach to developing employee learners' cornerstone skills. For example, Boat Pro, a boating course sanctioned by the Canadian Coast Guard, also builds several cornerstone skills, namely:

- ✓ classroom learning skills (including note-taking, study and test-taking skills; participating in large group discussions; debating and role playing)
- ✓ reading comprehension—learners work through a comprehensive course book
- ✓ group work skills
- ✓ safety skills
- ✓ regular attendance

The Learning Centre's innovation lies in recognizing that people can develop skills that are transferable to the workplace while learning about topics that interest them and relate to other parts of their lives.

Transfers of Skills Learned in The Learning Centre to the Job

Employees have successful experiences being self-directed—an important skill in the workplace—when they request and take courses in The Learning Centre. They also practise their computing, decision-making, problem-solving, teamwork and meeting facilitation skills in non-threatening situations. Employees want to learn and practise learning how to learn, which helps them in their training for using the new technologies they have to operate in their jobs. Examples of skills transfer include:

- A learner taking a Learning Centre course on how to buy a computer subsequently bought a computer through Cominco's computer acquisition program. Once he had his computer, he taught himself how to troubleshoot Windows on the basis that "there is nothing worse than having a beautiful machine and not being able to use all of the tools on it." Knowledge of Windows carries over very well into the workplace because Cominco is moving from a mainframe to a PC-based system.

- A shift worker who took a computer course practised his newly learned Internet skills during his four days off at home. He now uses them at work to do research on the Internet, downloading information on how other fire crews have dealt with different rescue situations involving hazardous materials.
- A couple of employees who took an Internet course and another who attended a workshop on spreadsheets pooled and applied their new expertise, pulling data relating to their assays off the company's Intranet and pouring them into spreadsheets to generate graphs to help them troubleshoot electronically rather than manually.
- Another employee engages in peer tutoring on the job by passing on to other employees things he learned in computer courses. General computer literacy enables employees to "make a more bold attack at a computer without worrying about ruining it or shutting it down."
- One employee who took a Learning Centre course on chairing meetings for her volunteer work as a hospital auxiliary began to see how interconnected and interdependent the roles of chair and minute taker are—if these individuals do not get together to prepare and discuss the agenda beforehand, the minute taker's notes are little more than his or her own personal notes. She realized that a team approach was needed to organize a meeting so that the minute taker has the buy-in of the chair and can pick out and record the important things that happen at the meeting. She immediately translated this insight and the process skills she learned in the course to her workplace responsibilities.
- Employees who take The Learning Centre's popular Cornerstones of Chemistry course enjoy understanding the chemistry behind their jobs. They

An initial challenge was not being able to show a cause-and-effect relationship between investment in learning and positive growth in the bottom line. ►

An important key to success is obtaining support from senior management. ►

Another key to success is having an energetic and passionate co-ordinator. ►

become more acute observers and reporters of what they see in their part of the refining process during their shifts. This knowledge better enables operators to work with engineers and technicians and to respect the direction they set instead of merely “going through the motions.”

- Another employee uses what he learned in a Law 12 course in his union activities at Cominco.
- Employees who take Boat Pro through The Learning Centre find they apply the note-taking, reading comprehension and study skills to their jobs.
- Employees who have taken assertive communication and other courses testify that there is a greater ease of communication on the plant floor. Good communications skills enable employees to:
 - communicate more effectively on their shift change (e.g., leave clear instructions on what happened on their shift for the next shift);
 - approach people confidently and ask questions assertively;
 - negotiate with suppliers and customers regarding the scheduling of deliveries and the preparation of commercial documents;
 - increase their self-confidence—they take ownership of their own learning in The Learning Centre and are no longer afraid to apply for jobs in other areas of the company.

Initial Challenges

- Not being able to show a cause-and-effect relationship between investment in learning and positive growth in the bottom line
- Reassuring supervisors that learning at the Centre would be done on the employees’ own time and would not require additional work-related coverage

Keys to Success

- Obtaining support from senior management—the company must be

willing to commit philosophically and financially to The Learning Centre

- Canvassing employees to ascertain their learning needs and priorities
- Forming a joint union/management committee—the company and its union(s) must commit to working together
- Setting out ground rules clearly from the start and being clear about why one is trying to establish a learning centre and what will and will not happen
- Hiring a co-ordinator who can sell the idea across the company—someone who recognizes that people are highly skilled and knowledgeable in their work areas but may benefit from refreshing their cornerstone skills. (A cornerstone joins two walls, i.e., existing knowledge with new knowledge. Focusing on “foundation” skills puts people below ground and suggests they lack fundamental knowledge, which is demoralizing and inaccurate.)
- Identifying champions who will establish a Learning Centre presence across the organization—for example, field questions and provide and post information about The Learning Centre in their plants and offices as well as promote and connect learners with the Centre
- Ensuring ongoing communication and promotion
- Treating learners as customers, making them feel at home and responding to their concerns immediately
- Putting on courses requested by, and reflecting the interests of, employees
- Supporting learning paths outside The Learning Centre—developing a strong working relationship with local education providers, including an alternative school willing to support Cominco employee learners in the evening, and working with the local school board to ensure that adult learners’ training and work history are recognized as counting against the requirements of an adult high school diploma

Employees gain self-confidence and are no longer afraid to apply for new jobs or accept new challenges. ►

- Hiring only “A team” instructors—prospective facilitators have to teach for the co-ordinator first to ensure they can accommodate different learning styles, engage learners, design suitable hands-on activities and prepare simple, concise and useful handouts to help keep the learning alive and enable learners to practise and apply what they learn
- Being non-judgemental when teaching
- Leaving rank outside the door—managers, production workers, tradespeople and office workers learn side by side and have their shared interest to talk about outside the class

Benefits for Employees

- Gain self-confidence and are no longer afraid to apply for new jobs or accept new challenges
- Reinforce their skills—validate the ways that work best for them
- No longer “feel lower than anybody else they are dealing with”—find their thought patterns unblocked and believe they can do anything they put their minds to
- Know someone believes in them
- Overcome the feeling of isolation that stems from their perception of the stigma attached to lack of formal education
- Are motivated to go further and challenge themselves to upgrade—it is an easy choice to take an easy route but not very satisfying
- Experience personal development and growth
- Take courses in how to facilitate classes and become facilitators at The Learning Centre
- Put faces to names and voices and communicate across the company through networks they build while taking courses together at The Learning Centre
- Participate in a relevant curriculum that they design and go “back to school” on their own terms
- Renew their interest in learning in a safe environment where there is “no

Employees develop oral presentation, process and critical thinking skills. ►

- pressure to pass but encouragement to do well”
- Develop oral presentation, process and critical thinking skills
- Learn what they want to learn when they want to learn it (i.e., at times that do not conflict with their work or family schedules)
- Learn in a comfortable, non-institutional setting
- Learn to set personal and career educational goals and achieve them
- Become comfortable with using computers and are motivated to explore the technology and its applications
- Learn about the business while enhancing their employability skills
- See the value of education—how the knowledge and skills acquired through education are used on a daily basis
- Build cornerstone skills for further education and training—take advantage of other learning opportunities, including pursuing Grade 12 equivalency and further education
- Set an example for their children to finish school—getting your children to do as you say is easier when you do as you say
- See that they have better chances for promotion
- Take responsibility for their own learning

Benefits for Cominco

- Demonstrates support for the development of a culture of lifelong learning, shows an investment in its workforce and supports the company’s value of “Respect for the Individual”
- Builds a learning-active, engaged, flexible workforce that is better able to anticipate, respond to and manage change
- Provides another opportunity for employee growth and empowerment and sets employees up for success—providing them with engaging learning opportunities helps grow their confidence and capabilities, which in turn prepares them to have more latitude, assume more responsibility and make better decisions

Cominco builds a learning-active, engaged, flexible workforce that is better able to anticipate, respond to and manage change. ►

One in three employees took advantage of courses offered at the Learning Centre in its first two years of operation.



- Improves workforce skills, which helps employees run equipment to closer tolerances and builds competitive advantage
- Builds a successful partnership with unions in an area of common concern and mutual benefit
- Improves employee morale and provides a channel for cross-company communication
- Builds trust and open communication with employees—demonstrates a measurable response to employee needs and interests
- Empowers employees to ask questions when they do not understand something instead of fearing that people will look down on them
- Provides opportunities for employees to educate each other and build mutual respect
- Provides a concrete measure of employees' commitment to further learning

Achievements

- Since The Learning Centre opened its doors 24 months ago, 592 of Cominco's 1,800 employees (1 in 3) have taken at least one of the many courses the Centre offers. This demonstrates a real commitment to lifelong learning on the part of employees and positive support for lifelong learning on the part of Cominco.
- To date, 1,668 customers have been served at The Learning Centre (i.e., individual employee learners have taken, on average, 2.8 courses each, a positive indication that employees value workplace education)

The Learning Centre adds value to existing workplace training programs by extending employees' learning in areas of their own choosing.



- Of the courses requested and taken by employee learners, 12.8 per cent have been in explicitly academic subjects (e.g., Grade 12 completion, grammar, Cornerstones of Chemistry, effective reading, and math and English refreshers); 60.6 per cent have been computer courses (e.g., How to Buy a Computer, Introduction to the Internet, Introduction to Spreadsheets, and Photos and Computers); and 26.7 per cent have been in implicitly academic areas (e.g., Introduction to Stained Glass, Introduction to Photography, Boat Pro)
- Eighteen employee learners are pursuing the completion of their high school education
- Three employee learners have earned their Adult Dogwood High School Graduation Diploma, one with honours
- One learner who is doing his Grade 12 English wrote a letter to the editor of the local paper

Innovation

The Learning Centre is innovative in that it adds considerable value to existing workplace training programs by allowing employees to explore learning paths of their own choosing on their own time but at Cominco's expense. This approach supports individual growth and development through learning unrelated to the job, enhances the quality of life of employees and helps them fulfil their educational goals. It also supports the development of a culture of learning and builds a learning-active, engaged workforce who can better anticipate, respond to and manage inevitable workplace change.

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Thanks are due to our interviewees and to others who provided comments, including:

*Angie DeBiasio
Bruce Edmison
Al Graham
Ben Marrantino
Monique Mason
Brian Mauchline
Dwayne McDonnell
Kim Mercer
Glenn Muir
Debbie Martin
Merv Olson
Warren Ouderkirk
Jane Power
Ernie Quiding
Gail Rebelato
Roger Ridge
George Ritson
Tammy Salway
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ISSN 1205-1675

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