The Conference Board of Canada

CASE STUDY 12

A core product of the Employability Skills Forum, National Business and Education Centre

Program
Partnership

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Contact
Mr. Mike Walker
Director, Government Affairs
Chrysler Canada Ltd.
2450 Chrysler Centre
Windsor, Ontario
N8W 3X7
Tel: (519) 973-2101
Fax: (519) 973-2226

Name of Program
Chrysler Canada Ltd.'s Windsor Experiment

Skills Developed
- *Academic*
- *Personal Management*
- *Teamwork*
- *Science Literacy*

Developing community college and university students' employability skills

Chrysler Canada Ltd.'s Windsor Experiment

Benchmarking Against Global Best Practices

BY KURTIS KITAGAWA

August 1998

Chrysler Canada is helping to develop the knowledge workers of the future by enhancing its employees' generic employability skills and by benchmarking the apprenticeship training programs it builds on these skills against global best practices.

Overview

In 1995, Chrysler Canada Ltd. launched a series of benchmarking initiatives called the Windsor Experiment. Its purpose was twofold: (1) to identify best practices in apprenticeship training programs and (2) to explore joint research and development ventures involving the close collaboration of industry, college and university and government partners to increase the number of qualified Canadians who can fill the large number of job vacancies in the automotive industry. In undertaking the Windsor Experiment, Chrysler Canada is facing up to the realities of youth unemployment and industry's need for highly skilled and flexible workers.

As a major Canadian employer, Chrysler understands the importance of developing the generic skills, attitudes and behaviours described in the Conference Board's Employability Skills Profile and the scientific, technological and mathematical competencies identified in its Science Literacy for the World of Work. Chrysler is challenging conventional stereotypes about apprenticeship and transforming peoples' awareness of the imperatives of the knowledge-based economy into active participation in preparing themselves to be knowledge workers.

For Chrysler, this entails much more than acquiring a quantity of technical knowledge and know-how; it demands vigilant benchmarking, constant retraining and upgrading of skills and ongoing education. In short, it requires people to become lifelong learners.

In Chrysler's view, becoming an active contributor to the expanding knowledge-based economy means creating innovative, new partnerships between industry, technical schools and universities based on sharing information and rewarding achievement. It also requires systemic changes to the public education system, restreaming secondary students and allowing for academic–vocational/vocational–academic crossovers in midstream to facilitate, among other things, the complex mix of education and training needed to develop knowledge workers.

National Business and Education Centre (NBEC)

Director: MaryAnn McLaughlin

Research Associates:
Michael Bloom
Kurtis Kitagawa
Joeanne Mahoney
Douglas Watt

Awards Co-ordinator:
Linda Scott

Program and Research Assistant:
Jean Smith

NBEC Mission
We help business and education leaders work collaboratively to promote the development of a learning society that will prepare Canada's young people for a changing world.

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In the long term, Chrysler envisages creating a fully integrated learning system that eliminates barriers to co-operation and unites industry, education and government in the common purpose of employing youth and producing more skilled workers to increase national wealth and improve individual standards of living. Chrysler would like to reshape notions of excellence by underlining the importance of benchmarking and instilling an ethic of continuous performance enhancement. Chrysler anticipates the formation of a new attitude that combines recognition of the value of academically trained generalists with an appreciation of the importance of technically skilled workers, who can both adapt to change and lead innovation.

Groups Served

- Students, colleges and universities, automotive industry, Canadian youth and the Canadian economy.

Objectives

- Increase the number of Canadian high tech/value-added manufacturing jobs.
- Encourage and greatly broaden the scope of the school-to-work approach of training and educating young people by integrating essential classroom learning with relevant and rewarding workplace experiences that relate to the development of highly skilled, flexible tradespeople.
- Develop apprentices' generic employability skills—especially their self-confidence and lifelong learning and teamwork skills—while providing them with state-of-the-art technical training.
- Enhance the attractiveness of career paths that do not necessarily incorporate university degrees.
- Act as a catalyst to encourage others to develop non-traditional apprenticeship programs to enrich the Canadian education system and strengthen the links between school and work.
- Reinvigorate the Canadian automotive sector, which now employs an aging population (40,000 of the 60,000 employees of the Big Three are forecast to retire in the next five years).

Activities

In 1994, Chrysler Canada Ltd. committed itself to establish the University of Windsor/Chrysler Canada Ltd. Automotive Research and Development Centre and endowed two chairs at the University of Windsor: one in mechanical engineering, the other in alternative fuels.

In 1995, Chrysler carried out its first benchmarking study to identify best practices in European (French, German and British) technical education and R&D institutions (partnering industry, academia and government) that could be adopted and adapted in Canada. Chrysler's benchmarking team looked at the success of institutions in adapting curricula in response to industry requirements and the well-articulated European view that ensuring national prosperity depends on sustaining three-way industry–academia–government support for technical education.

In 1996, Chrysler conducted a second benchmarking study to identify best practices for promoting and managing educational training and models of apprenticeship potentially applicable to the Canadian scene. Of special interest to the benchmarking team was the Austrian and German Dual System, a two-stream apprenticeship-training–liberal-arts/professional-education approach to formal education, which allows students to move out of the apprenticeship training stream into a liberal arts or professional education stream upon passing an examination. The team was particularly struck by the social status that attaches to in-plant training and work experience leading to an apprenticeship certificate: in many ways this was on a par with the prestige attached to earning a university degree in Canada.

Resources Required

Research and Development Centre

- $45 million to date from Chrysler (plus $4 million from the federal government and $1.7 million each from the Province of Ontario and the City of Windsor).

The Employability Skills Forum Mission

We are committed to improving the productivity and quality of life for individuals, organizations and society by enhancing the employability skills of the current and future workforce of Canada.

This study was made possible through funding by members of the Employability Skills Forum.

Forum Members

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Forum Manager: Michael R. Bloom

Apprenticeship Program

- $3 million for apprentices' wages and skilled tradespersons' mentoring time for the pilot program.

Achievements/Outcomes

- In January 1996, 30 students enrolled in St. Clair College of Applied Arts and Technology's first co-operative term for mechanical engineering technology.
- In May 1996, the University of Windsor and Chrysler Canada opened their Automotive Research and Development Centre.
- In December 1997, St. Clair College and Chrysler Canada opened their Design and Production Centre, partly equipped by Chrysler. Chrysler and St. Clair created scholarships to encourage youth to pursue technical careers.
- In January 1998, Chrysler Canada, their labour partner the Canadian Auto Workers (CAW) and St. Clair College launched an electrical/electronics co-op program. It provides full-time education and employment over four years for 25 young people, who study for three days per week and receive paid apprenticeship training for two days per week at Chrysler Canada, earn Electronics Technician and Electronics Technology diplomas, complete all of the coursework requirements for provincial certification as skilled tradespersons and partially fulfil the requirements of their CAW Chrysler certificate of apprenticeship.
- The University of Windsor has become the third largest co-operative education university in Ontario.
- St. Clair nominated Chrysler for the National Council for Resource Development's prestigious international Benefactor Award, which Chrysler subsequently won.
- Chrysler and St. Clair College have reformed apprenticeship training delivery, making available part-time evening apprenticeship training and are considering starting day-release delivery as well.
- Students from the University of Windsor acted as the host team for the 1996 Chrysler Propane Vehicle Challenge and participated by converting a 1996 Chrysler minivan to run on propane.
- In the 1997 Chrysler Challenge, the University of Windsor, this time partnered with St. Clair College, designed, developed and tested a propane vehicle.
- A representative of Chrysler and members of the faculty and administrations of St. Clair College and the University of Windsor are working together to (1) expand concurrent college and university programs, (2) bridge college technology programs to university degree programs in science and engineering, (3) expand the articulation of college-to-university programs, and (4) enhance the transferability of credits between college and university programs.

Benefits

Students

- Complete research projects that relate to products or services for which industry is willing to pay, and earn themselves academic credit and partially fulfil their postgraduate degree requirements.
- Acquire self-confidence, teamwork and lifelong learning skills by receiving in-school instruction and hands-on in-plant training in a technology-driven sector with meaningful opportunities to use, and be compensated for using, the generic and technical skills they develop.
- Are steeped in the institutional knowledge of the plant and develop the capacity to re-engineer current technologies to meet future needs.

Industry

- Benefits from technology development and transfer of technology from academia to industry production floor.
- Develops industry-oriented postgraduate students.

The Conference Board of Canada
255 Smyth Road
Ottawa, Ontario K1H 8M7
Canada
Tel: (613) 526-3280
Fax: (613) 526-4857
Internet:
http://www.conferenceboard.ca

The Conference Board, Inc.
845 Third Avenue
New York, N.Y. 10022 U.S.A.
Tel: (212) 759-0900
Fax: (212) 980-7014
Internet:
http://www.conference-board.org

The Conference Board Europe
Chaussée de La Hulpe 130, bte 11
B-1000 Brussels, Belgium
Tel: (32) 2.675 54 05
Fax: (32) 2.675 03 95

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Chrysler Skilled Tradespeople

- Contribute to the trades skill base through the transfer of state-of-the-art knowledge not available in other sectors such as construction.
- Help develop tradespersons among groups in society (women, in particular) who have traditionally had limited access to skilled trades opportunities.

Canadian Economy

- Benefits from creation of new scientific and production jobs as technology is transferred from academia to the production floor.
- Benefits from a reduction in youth unemployment.

Innovation

Chrysler has investigated models for systemic public education system reform while contributing a new apprenticeship program of its own. This combination of self-interested action and socio-economic vision is crucial to Canada's long-term prosperity. Generic skill development goes hand-in-hand with the retooling of current technologies, and equips apprentices and employees with the capacities they need to succeed in their rapidly changing work environment and to integrate themselves into an increasingly isolating wider world.

Keys to Success

- Committed people in both academia and industry.
- Supportive government policy that regards the encouragement of technical education and R&D as essential to national wealth and prosperity.
- A socio-economic culture that is not hostile to technical careers.

Greatest Challenge

Perhaps the greatest challenge facing Chrysler is the task of developing knowledge workers, who can work at the same level of skill as today's workers, to carry out the knowledge work the company will be involved in five years from now. As knowledge work becomes more complex, developing workers with a broad-based education and a high degree of flexibility becomes even more imperative. To respond speedily to the challenges of technological change, to the imperative to use technological innovation to obtain a share of the global market, to the pressing need to fill vacancies created by an aging workforce (as many as 40,000 by the year 2005), and to generate the capacity to train new workers (at their current capacity Canadian community colleges will only be able to supply 14,000 graduates to fill the forecast 40,000 vacancies), Chrysler Canada is investigating creative new ways to integrate the delivery of training by those who have the expertise, whether they be vendors of robotics equipment, skilled tradespeople on the shop floor or universities and colleges. For example, Chrysler is exploring the possibility of an on-site campus that involves a three-way partnership between business, education and government as one way to make education and training more accessible and convenient for workers and more relevant and rewarding for students.

NBEC Publications Relating to Employability Skills Development and Assessment

Employability Skills Profile

Science Literacy for the World of Work

Best Practices in Assessing and Developing Employability Skills—20 Case Studies (Sept. 98)

The Economic Benefits of Improving Literacy in the Workplace, 206-97 Report.

Enhancing Employability Skills: Innovative Partnerships, Projects and Programs, 118-94 Report.

Linking Teachers, Science, Technology and Research: Business and Education Collaborations That Work, 144-95 Report.

1998 100-Best Partnerships IdeaBook

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