

Workplace Learning



The Role of
Canadian Colleges
and Institutes
in Meeting
Canada's Professional,
Technical and Trade
Skills Challenges

Inside...

 **ACCC INTERNATIONAL**
Vol. 7, No. 2, 2002 ISSN 1192-1846



Sustainable
Development
through
Education



Inside:

Comment	3
Industry and Colleges: Key Partners in Meeting Canada's Skills Challenge	4
TOWES [Test of Workplace Essential Skills]	6
Workplace Education That Works!	7
It's not Rocket Science - but someone has to fix the Space Shuttle	8
GM-Niagara College Partnership: An Evolution from Training to Learning	10
Applied Research Transfer to the Workplace through Training and Learning - A Brief Example	11
Events	12
Resources	14
People	15

*Cover Photo: Courtesy of SkillPlan BC, Bow Valley College

VOLUME 7 ISSUE 1

COLLEGE CANADA, published once per year by the Association of Canadian Community Colleges (ACCC), can be found at www.accc.ca.

Chair, Board of Directors:

Donna Allan

President:

Gerald Brown

Editor-in-Chief:

Lorna Malcolmson

French Editor:

Debby Wilson

Editorial Assistant:

Judy Barbeau

Translation:

La boîte à mots
Yvon Lepage

Distribution:

TTSDistributing

Printing:

Grenville Management & Printing Ltd.

As the newsmagazine of ACCC, COLLEGE CANADA is provided to all member institutions through ACCC membership fees. COLLEGE CANADA informs the college and institute community and its partners of the Association's activities and provides members with a vehicle for national information exchange.

Member institutions are invited to forward press releases and information updates to the attention of the Editor-in-Chief.

Contents may be freely reprinted with proper credit to the publication.

Mailing Address:
College Canada
Association of Canadian Community Colleges
1223 Michael Street North, Suite 200
Ottawa, Ontario
K1J 7T2

Telephone: (613) 746-2222, ext. 3123
Fax: (613) 746-6721
E-mail: lmalcolmson@accc.ca

ACCC is a non-share capital corporation existing pursuant to the laws of Canada.



Knowledge and Innovation through Workplace Learning

When Canadians want to upgrade their current skills, revise their career paths or respond to the technological requirements of today's employers, what do they do? By all accounts, a large percentage opts to attend their local college or institute on a part-time basis. When employers determine that on-site skills development is a viable option, they generally contract the local college or institute to custom design and deliver workplace-based learning. Employees remain on-site; skills and learning are unique to their working environment and immediately applicable. It's a win-win situation for the employer and the employee.

Colleges are the largest suppliers of advanced adult training and education in Canada with 2.5 million full and part-time students with campuses in over 900 communities in all regions of Canada. They represent the primary national network mandated to support government, industry and labour in the design and implementation of a national human resources strategy that provides Canadians, both employed and unemployed, with the tools required to become lifelong learners.

The federal government's ambitious 2002 Innovation Strategy papers - *Knowledge Matters* and *Achieving Excellence* - seek to develop the knowledge, skills and capacity of Canadians across the country, from those in major urban centres to the most rural and remote areas. To enable Canada to build the requisite ability to compete in an increasingly demanding knowledge-based economic structure, community development and innovation are emphasized in the Strategy with workplace learning and training identified as a key mechanism for reaching Canadians.

By reaching the population of over 900 communities across Canada, colleges and institutes are uniquely positioned to contribute to the Innovation Strategy. These institutions are providing flexible and adaptable community learning resources and are involved in community networks of employers, civic groups and local/regional governments. They are often the catalysts for industry-education interaction, addressing the relationship between a skilled, employable workforce and healthy community and local economic development.

As such, this issue of *College Canada* provides an overview of the role of colleges and institutes in workplace learning and training. From virtual apprenticeship to testing workplace essential skills to the views of industry and applied research and technology transfer, this issue highlights the unique and essential role of colleges and institutes in contributing to Canada's future. ■

Gerry Brown
President, ACCC

Industry and Colleges: Key Skills

By the Honourable Perrin Beatty

Canada's growing skills shortage has emerged in recent years as the most serious issue facing its vital manufacturing sector.

Manufacturers are frequently more concerned about not having the skilled workers they need than they are about other elements of innovation, about climate change (even though the potentially costly ratification of the Kyoto Protocol looms large), about trade facilitation, and even about tax issues. They recognize that people, properly trained, are Canadian companies' most important assets.

In the face of burgeoning international competition, our manufacturers are under unrelenting pressure to innovate and improve their productivity. To succeed, they must rely on the skills, flexibility and ingenuity of their employees. Innovation is as much about building the skill and knowledge base of Canada's industrial workforce as it is about developing and implementing new products, processes and technologies: simply put, companies cannot innovate if their employees cannot innovate. However, a shortage of skilled workers - the result of demographics, coupled with an unfortunate reluctance among young people to choose manufacturing careers - limits the growth of Canadian

manufacturers and, in some cases, threatens their survival.

In addition to an enduring demand for technical skills, there is a growing need for more general employability skills such as problem

Manufacturers are looking towards Canada's community colleges - with their industry ties, their focus on employability skills training, their forward-looking attitude, and their ability to respond quickly to change - as key partners in meeting the skills challenge.

solving, teamwork, communications, literacy and numeracy. Combinations of skills are needed more and more in the manufacturing sector, which must be able to adapt quickly to evolving demands.

The changes in the competitive landscape that have increased the value of such skills in

manufacturing have made it harder for companies to keep pace along the entire skills front, and rendered manufacturing management and leadership skills - also in increasingly short supply - more important than ever. Even manufacturers with sufficient skills in their workforce to meet their needs today can by no means count on those same skills being adequate to meet their needs tomorrow. They must constantly upgrade their employees' skills just to maintain their competitiveness, let alone improve it.

Despite resource constraints that affect small and mid-sized companies in particular, Canadian manufacturers are making significant efforts to meet 21st-century worker training and upgrading imperatives. Successive editions of our annual *Management Issues Survey*, and a cross-country series of consultations on skills issues that Canadian Manufacturers & Exporters (CME) conducted among its members this summer confirm their determination to continue to invest and take action in this critical area.

But they cannot succeed on their own. Manufacturers are looking towards Canada's community colleges - with their industry ties, their focus on employability skills training,

Partners in Meeting Canada's Challenge

their forward-looking attitude, and their ability to respond quickly to change - as key partners in meeting the skills challenge.

Working together, we need to foster clearer links between the education and training programs offered by colleges and institutes and the needs of industry. Those programs must place a priority on practical experience and be geared to meeting real demands for new technical and business management skills, as well as basic skills.

We also have to develop more customized training to meet individual needs. Companies operating in various manufacturing sub-sectors often depend on their workers to perform extremely specialized jobs for which there is no readily available training. Some have to develop and provide all training themselves, as existing programs do not meet their unique requirements. Among other actions, building centres of excellence within and across colleges and institutes can make it possible to offer programs that fit the specific needs of industry sectors.

Finally, and perhaps most importantly, we must introduce a greater degree of flexibility into how such programs are delivered, to respond better to companies' focused

requirements and time limitations on business training.

Most notably, workplace or on-site training is rapidly gaining interest as an effective and practical alternative to traditional classroom training or off-site seminars, and computer-based solutions offer exciting possibilities in this area. Among the many advantages of customized, on-site training programs developed by community colleges in partnership with industry are the flexibility they offer employers and employees, their ability to link theory to practice, the immediate transfer to the workplace of new and upgraded skills and knowledge, and the recognition of previous work experience, as well as reductions in training time, absences from the workplace, and travel costs. These advantages are especially important for SMEs, which must carefully evaluate their expenditures on training and education on the basis of clearly defined needs and in support of targeted outcomes.

There are already many instances of collaboration, mainly local, between industry and community colleges in Canada. The challenge now is to bring this partnership approach to a national level. Fortunately, there is solid ground on which

to build: like CME, the Association of Canadian Community Colleges recognizes Canada's skills shortage as a major national problem requiring national solutions.

As the federal government seeks to develop and implement a national innovation strategy, it must work cooperatively with industry and community colleges, represented by our respective associations, to outline the skills needed in the economy and to develop appropriate responses. CME can tell it what the current and anticipated skill gaps are in the manufacturing sector, and identify specific needs. Community colleges can help determine how those needs can best be met through education and training programs, in the classroom and in the workplace.

I am confident that, together, we will succeed in meeting Canada's skills challenge. ■

Perrin Beatty is President and CEO of Canadian Manufacturers & Exporters, whose members account for 75 percent of Canada's manufacturing output and 90 percent of its exports. CME has a national office in Ottawa, corporate facilities in Mississauga, Ontario, and active divisions in all provinces.

A partnership between an Alberta college and a British Columbia not-for-profit organization is giving businesses in Canada an important tool to help them become more profitable and productive.

Many companies have realized that their greatest asset is their staff. Employees who are well trained can boost their bottom line through reduced error rates, reduced workplace injuries, less downtime and fewer workers' compensation claims – if they have the right skills. The Test of Workplace Essential Skills (TOWES – www.towes.com) compares an individual's skills against the requirements of specific occupations, identifying areas of competency and areas for further development.

“Essential skills are the Velcro to which all other training sticks,” Conrad Murphy, Business Leader, Business Development at Calgary's Bow Valley College. *“Workers must first have the basic literacy and numeracy skills to understand the higher-level training and to make the training stick.”*

Bow Valley College (www.bowvalleycollege.ca) has specialized in adult education for over 35 years in Calgary and at campuses throughout southern Alberta. The College places special emphasis on practical-learning solutions for the workplace and its commitment to training and development of the front-line workforce. In partnership with SkillPlan BC (<http://www.nald.ca/skill.htm>), the BC Construction Industry Skills Improvement Council, the College developed the Test of Workplace Essential Skills (TOWES), a nationally recognized bank of test items that, collectively, form an assessment tool to measure essential skills in a workplace setting. TOWES was developed with funding from Human Resources Development Canada's (HRDC) National Literacy Secretariat.

TOWES enables employers to assess individual ability in the areas of reading text, document use and numeracy. These three key dimensions of literacy have been found to be closely linked to success in the workplace. “A lack of essential skills can sometimes be a hidden and draining factor on a business,” says Murphy. “Front-line workers who have difficulty absorbing or understanding training on new processes or new technology can have a deficiency in essential skills. This affects vital areas of a business, including health and safety, errors in quality of production and can cause communication issues.”

Using TOWES, employers are able to set reasonable and valid entry-level job requirements for positions within their companies. Until now, many employers have been using years-in-school or other credentials as proxies for ability. This can be unfair to other qualified individuals, some of them foreign-born, who have the skills but not the

TOWES

[Test of Workplace Essential Skills]

By Conrad Murphy,
Business Leader, Business
Development, Bow Valley
College and
Michael Herzog, National
Account Manager, Bow
Valley College

educational credentials in Canada. With TOWES, employers are able to accurately assess all candidates in order to find the best fit for the position.

Results from the test are delivered in a framework based on the International Adult Literacy Survey levels and are consistent from one practitioner to another and from one workplace to another. TOWES has undergone stringent validation and testing protocols, headed by Dr. Irwin Kirsh and Dr. Kentaro Yamamoto from Educational Testing Services in Princeton, New Jersey. TOWES has also been extensively field-tested, both commercially and through demonstration projects. Commercial clients include BHP Diamonds (Ekati Mine – Yellowknife, NWT), Keyano College and Suncor in Fort McMurray. Demonstration project partners include the Saskatchewan Wheat Pool, the Halifax Employers Association (with the Government of Nova Scotia) and the Government of Alberta.

A new version of TOWES is in development. This version will serve as a ticket to employment; just as people use passports to travel abroad, people applying for jobs with participating employers would be able to use a TOWES ticket as a credential. People would acquire the credential in one of three ways:

- through publicly accessible test centers, largely housed out of community colleges throughout Canada, individuals would be tested and be able to access upgrading programs to improve their TOWES scores;
- through programs at organizations that provide work-focused training to the unemployed, TOWES testing would be integrated with training so graduates exit from their program with both a certificate and the TOWES credential; and
- through K–12 school systems, TOWES and its related curriculum would be introduced into school systems in Canada, so that students would have a TOWES credential as part of their portfolio upon graduation.

HRDC and the Conference Board of Canada are just two high-profile organizations that have targeted the development of essential skills as a major issue affecting Canadian businesses and our economy. As part of its national skills agenda, HRDC is focusing on essential skills as part of its strategy to help Canada compete. By making TOWES available to employers, educational institutions and government, Bow Valley College and SkillPlan BC are working to ensure Canadian businesses have the employee base they need to succeed. ■

For more information on TOWES, contact Conrad Murphy at tel.: 403-297-4929 or Michael Herzog at tel.: (403) 297-3822 or visit www.towes.com

Workplace Education That Works!

By Donna Allan
President, Lethbridge Community College
Chair, ACCC Board of Directors

When a college is truly part of its community, it needs to be in constant touch with the employers in that community and work closely with them to ensure that their labour needs are being met. Good communication ensures that the community will continue to be economically strong and visible.

As a small rural city in southern Alberta, Lethbridge offers both unique opportunities and challenges to business and industry. Training programs that work in larger centres are not always appropriate to Lethbridge. One initiative that has proven very successful for the restaurant industry is a flexible adaptation of the traditional cook apprentice training program. Rather than cook apprentices leaving work for a typical eight-week training block, the College developed, through industry partnership, a unique “weekly apprenticeship program. Instead of leaving work, relying on EI financial support, and traveling to Calgary for training, cook apprentices now continue in their regular jobs, live at their regular residence, and attend Lethbridge Community College one day per week for 40 weeks. Overall, apprentices complete their full apprenticeship in the same number of years as if they took a “block training” approach.

Employers are extremely pleased with the program as, previously, cooks leaving for training frequently took new jobs in Calgary, which created staffing problems for Lethbridge employers. In other cases, apprentices with young families were reluctant to endure long periods away from family to take training; so employers were unable to raise staff skills to needed levels. Now local industry has a highly skilled workforce and new apprentices have a wonderful work-learn-and-earn opportunity.

Another enterprising innovation is a collaborative initiative with the Lethbridge local Economic Development Authority and the Chamber of Commerce. Lethbridge is located next to two of the largest reserves in Canada and has a high population of First Nations people in the community and the surrounding rural area. While it is widely acknowledged that Canada will suffer economically and socially if new workers are not entering the workforce at a rate commensurate with the baby-boomer exit from the workforce, First Nations peoples have been identified as one group that is underemployed and has an untapped potential.

Yet there is a lack of visible employment of First Nations people in off-reserve businesses. Lethbridge Community College now has a First Nations Employment Counselor to work with First Nations students as well as local employers to develop practicum opportunities whereby students can gain work experience and demonstrate their skills to potential future employers. The College is also working with the Native Human Resources Sector Council to develop full-day workshops for employers that address the economic benefits of hiring qualified First Nations graduates.

Another rural initiative in the developmental stages centres on a particular rural town within the College’s service region. The town’s Chamber of Commerce, municipal government, and school officials invited the College’s industry training outreach staff to provide leadership in a collaborative approach to local workforce development. This economic development venture acknowledges the town’s mixed economy of food processing, energy resources, construction, and agricultural services. In order to maintain and enhance the local workforce capacity to cope with potential growth opportunities, the town would like to become a training centre—not to be confused with the term “satellite campus” - to ensure a future for the town’s industries and its residents alike. Employers are offering job shadowing and work experiences and local companies will provide equipment, job sites and some training. Vacant space in the local school will be available for meeting rooms and work-related seminars and the College is facilitating the organization and delivery of the training.

Good communication between the College and the community has allowed training to be truly driven locally, viable and visible in meeting local workforce development needs.

At Lethbridge Community College, we intend to be the leader in workforce training. In order to achieve this aim we will remain in continuous dialogue with employers and position the College to help all of our learners be learners for life. ■

It's not Rocket Science - but someone has to fix the Space Shuttle

**By Michael Kidney,
Department Head,
and Sue Boutlier,
Instructional
Designer,
Virtual Campus,
Nova Scotia
Community College**

The saying "it is not rocket science" can often be heard as a metaphorical reference to many different things. The phrase is meant to imply that the content is not overly complex, particularly in relation to the sophistication of the science and engineering involved in building rockets. In today's knowledge economy information surrounds us everywhere. More and more, it is not the content that is the problem - it is the translation of content to practice that is becoming the growing

challenge. There is a broadening skills gap reflective of the growing need for a skilled workforce. Rocket science per se is not a problem, but the growing challenge at hand may be finding someone who will be able to fix the proverbial rocket.

Nova Scotia Community College (NSCC) is one of the places people can go to learn skills. NSCC is a relative newcomer on the Canadian Community College scene. The College is made up of a pan-provincial network of campuses united by the proactive mission of "*Building Nova Scotia's economy and quality of life through education and innovation.*" In the spirit of the mission statement, the reach of the College extends beyond these physical campuses as extensive customized training and industry partnerships have been created to take the college beyond its walls. In addition, the scope and reach of the College has also been broadened through a commitment to a comprehensive continuum service

delivery, facilitated in part by NSCC Online Learning.

NSCC Online Learning was originally developed within a partnership that existed between the Nova Scotia Department of Education and Culture, NSCC and Human Resources Development Canada. This project was initiated by the Apprenticeship Training Division of the Nova Scotia Department of Education and Culture in direct response to feedback from industry indicating the changing landscape within workplace training and apprenticeship. From industry's perspective, changes were needed to the structure of apprenticeship training. The existing method of block release programming required apprentices to travel to central locations to attend training and this had several levels of impact. For the apprentice, leaving home for extended periods of time was both socially and financially taxing. Employers were left shorthanded which affected all aspects of their business. Finally, for



Students and instructor eager to begin a Power Engineering Program on-site at Brooklyn Energy Centre - a waste wood co-generation facility supplying electrical energy to Nova Scotia Power Inc. and steam energy to Bowater Mersey Paper Company.

both the Apprenticeship Training Division, and the training providers the existing methods were not getting skilled workers into the workforce any more efficiently and obviously not solving any skill shortages issues. In fact, the system generates a downward spiral for all concerned in terms of the skill shortages. A company that requires skilled workers sends an apprentice away from the workplace to train; the workplace is now more shorthanded than it was to begin with and it is difficult to replace someone for the short term. The solution was to keep the apprentice in the workplace and bring the training to them using methods that transcended time and location. The project was developed with some basic values that would drive on-line development to this day at the NSCC.

The outcomes of the initiative are demonstrated in the scope of alternate delivery options available at the NSCC. The NSCC offers Apprenticeship Programming using this innovative alternate delivery model. This includes programs such as Automotive Service Technician, Cook, Industrial Electrician, Construction

"This is a cost saving to both employer and employee. The employer need to replace the employee while away on training is reduced, [and] the financial burden on the apprentice is reduced i.e. travel expenses, lodging, meals." (Brooklyn Energy Employee)

Electrician, Gasfitter, Power Engineer (4th, 3rd, 2nd Class), and Refrigeration Plant Operator. Development is nearing completion on other programs including Plumber, Carpenter, Machinist and Oil Burner Mechanic. Over 800 individual apprentices have used the on-line training, each taking multiple courses. In addition to the

apprenticeship clients, NSCC Online Learning serves approximately 1000 students per year in programs such as Business, Nursing and Library Technician. These learners access their training from home, at work, at the campuses of the NSCC, Public Libraries, and C@P sites- essentially anywhere an Internet-connected computer can be located. The

"I am interested in pursuing my apprenticeship this way because I could start right away without having to wait for the time of year when it is offered at the school, plus I wouldn't have to miss any time at work." (Female, Industrial Electrician Apprentice)

success rate is comparable to the regular classroom students and this year the student who scored highest on the Electrical Interprovincial Examination in Nova Scotia had taken more than 50% of his training on-line.

It is important to note that these online courses represent only a portion of a comprehensive service delivery model that has been developed at the NSCC. This service delivery model includes traditional face-to-face learning environments. Online learning environments and a growing diversity of hybrid learning environments that involve a little bit of both. A comprehensive service delivery model is all about providing accessibility to learners. We have several learners online who may have never received training without the access provided by this commitment to a comprehensive service delivery model.

It has been said that if you are not "on the edge" you are taking up too much space. In today's fast-moving knowledge economy, a better warning might be that "if you are on the edge,

watch you don't get pushed off!" Things move extremely fast in today's world. The recent rise and fall of many of the "Dot Com" training companies emphasizes the reality that training is not a "Dot Com" enterprise. Skill shortages require people to be trained, and trained well. People do not want their training to be an impersonal, high tech assembly line using entertainment style methodologies. Instead, the approach to learning must be one that is respectful of the learner, uncomplicated, and uses common sense. Concurrently, such approaches must be developed mindful of the reality of being able to reach people's homes. This accessibility requires consideration of the lowest level technological access point that ensures hardware and bandwidth requirements are kept to a minimum. Suffice it to say that where online learning is concerned "if you can't get it into people's homes, don't do it!"

With the impending skill shortages in Canada, the reality is quickly becoming that it is not possible to train people fast enough to replace out-going workers. Online learning and a commitment to a comprehensive continuum of education and training represent an ideal way to ramp up to meet this skills challenge in the new millennium. It provides flexibility and accessibility in the training of highly skilled workers – workers who will benefit from on-site, on-time, on-line education and training. And it is not just the workers who will benefit – on the larger scale, facilitating such training will help to address any skills shortages.

Maybe there will be someone to fix that rocket after all. ■

GM-Niagara College Partnership: An Evolution from Training to Learning

By Bea Clark
Director, Ventures – Employment
and Training Services
Niagara College

Seven years ago, Niagara College and General Motors (GM) of Canada, St. Catharines, decided to renew and enhance their long-standing training relationship guided by the following key objectives:

- Foster the development of symbiotic learning organizations;
- Develop transferable advanced manufacturing skills;
- Develop internal entrepreneurial skills;
- Enhance the relevance, transfer, and application of new skills and knowledge;
- Advance the quality, efficiency and accessibility of education and training; and,
- Create competitive advantages for local manufacturers.

Meeting these objectives required a significant transition from a training focus to a learning focus - a fundamental shift that had major implications for both trainers and learners. Trainers were no longer the controllers of the learning experience but facilitators of the learning process. The learners shifted from a passive role (receivers of information) to a much more active role with greater responsibility over their own learning experiences, ranging from initial 'problem posing' to the design and

delivery of content, processes and assessment.

The shift in focus from workplace training to workplace learning has also created a more dynamic and multi-faceted partnership between GM and Niagara College. With an on-site Learning Logistics Department staffed by college personnel, learning services have become more comprehensive. They include: the development and implementation of individual and organizational training plans; the development and maintenance of a common training information system; the assessment of individual and organizational needs; and, individual career counseling. The coordination and facilitation of in-class and on-the-job learning; the development of job aids and curriculum; and, facilitation of applied learning opportunities for students, faculty and staff are also services offered to GM.

By 1999 the GM Niagara partnership had demonstrated significant achievements, including the following:

- A new acceleration record for GM and possibly a worldwide industry best established with the ramp-up to production of the new GEN III engine
- Improved Engine Plant performance related to safety, quality, responsiveness, cost
- Establishment of an Advanced Manufacturing Learning Resource Centre

accessible to smaller regional manufacturers

- An annual average in excess of 1,050 training activities involving 8,023 registrants totaling 62,980 training hours
- Over 500 individual training plans developed, encompassing generic, GM specific and Original Equipment Manufacturer training facets.

These achievements are particularly remarkable in that the state-of-the-art manufacturing process installed for the *GEN III* engine, built just six months prior to launch, was a complete departure from the previous production technologies used by GM's St. Catharines employees. General Motors' historically most aggressive launch was made possible by a combination of the skilled and dedicated workforce at the St. Catharines' Engine Plant, and the strong partnerships and shared learnings within the community and the corporation.

Through an extensive learning program, facilitated by Niagara College, supported by Human Resources Development Canada (HRDC), and accomplished by members of the Canadian Auto Workers (CAW) union Local 199, Engine Plant employees now operate a cutting-edge computer-based manufacturing facility to produce the engines that power GM's popular full-

size pickups and sport utility vehicles. In addition to putting the plant in a strategic position to attract new business, the process that led to these accomplishments has enabled the employees to develop highly marketable and transferable advanced manufacturing skills and employability skills.

Niagara College co-op students, consultants and faculty played an integral role in the record-setting launch by fostering an

organizational culture for empowered, creative and dynamic learning. Ten co-op students from three programs acquired valuable experience and lessons through their placement with one of the world's leading manufacturers. Four college faculty members provided on-site technical and training expertise; augmented their own knowledge and skill sets through their experience in the *GEN III* and *Agile* projects; incorporated valuable lessons into their college curricula;

and ultimately heightened the region's manufacturers' commitment to Niagara College's Centre for Integrated Manufacturing. Finally, 16 college consultants and support personnel, working on-site over the past seven years, have aligned and honed their training and people development skills through the plant's transformation from a traditional mass-production facility to its present, far more flexible, agile and convertible systems.

Applied Research Transfer to the Workplace through Training and Learning - A Brief Example

By Chantale Perreault, BSc, Chemist

Director, Research and Development

Centre de développement des composites du Québec,

Cégep de Saint-Jérôme

Composite materials, often referred to as reinforced plastics, are used to improve the performance, durability and cost-effectiveness of manufactured products. The composite materials industry has experienced remarkable growth resulting in increased demand for industry-specific applied research and development and skills transfer for the workplace. The Quebec Ministry of Education responded by granting the status of Centre Collégial de Transfert de Technologie (College Technology Transfer Centre or CCTT) to Cégep de Saint-Jérôme, the only college in Quebec to offer a Diploma in Transformation Techniques for Composite Materials. The CCTT in composite materials is now known as the Centre de développement des composites du Québec (CDCQ) or the Québec Centre of Composite Development.

The CDCQ contributes to the growth of businesses in the composites sector through research and development activities and projects, as well as the provision of specialized training for companies operating within the sector. For example, CDCQ recently worked with a group of specialists from the Cirque du Soleil to strengthen their knowledge of the properties and applications of composites used for stage structures, sets and props. Customized training allowed the Cirque du Soleil to target those structures or parts thereof that could benefit from the use of composites, and to optimize the properties of these materials.

The experience of initial quality training raised more questions about composites engineering and this led us to request a second course on composites from CDCQ. The program was tailored to our needs and the needs of the target group for this training. Courses were delivered in our own facilities and the schedule was adapted to our needs. The examples used for training reflected our realities. As a direct result of this training, we gained a better understanding of the mechanical capacities of composites. This supported the subsequent completion of two major projects for the Varékaï production. These projects could not have met the creators' specifications without the use of composites. In brief, the training was perfectly suited to our needs in every respect and generated economic benefits for us.

Sylvain Ménard, Project Manager, Scenic Prototyping Workshop, Cirque du Soleil

... cont'd on page 12

... cont'd from page 11

CDCQ has also been involved in workplace training and learning with Rhéa Sylvia Inc., a manufacturer of premium quality mannequins. In 2001, CDCQ developed a manufacturing process for mannequin heads and arms for Rhéa Sylvia Inc., as well as tooling (moulds) and the materials used (content). As recently as June 2002, the CDCQ launched a second project with Rhéa Sylvia Inc. to develop two mannequin models (12 components) and a manufacturing process for each component as well

The content and pacing of our training at CDCQ enabled us to assimilate the specific methodology developed as well as its foundations. Upon completion of this session, we possessed the required knowledge to experiment and adapt to optimize materials while maintaining the integrity of processes.
Paul Gilbert, Entrepreneur

Academic supervision in a technical teaching setting facilitated the transfer of expertise during this training. The training expertise was evident in the systematic advancement, suitability of advice and anticipation of questions raised by the learner. During this training, we also learned how to transfer knowledge to others. In a start-up company, people initially must be able to handle a wide range of duties, back each other up and train future employees. It therefore is important for us to form an initial core of learning directly at the source.
**Réal Tousignant,
Representative, Rhéa Sylvia Inc.**

as the transfer of technology and associated learning for employees of the company. Representatives of Rhéa Sylvia Inc. spent two weeks at CDCQ to learn the methodology for producing

It is very interesting and reassuring to find in CDCQ an environment where we can compare our personal backgrounds and work with the technicians and engineers who accompanied us to explore the factors specific to this application.
Pierre Tessier, Sculptor

moulds and to acquire skills in all stages of the production of tooling.

The CDCQ partnerships with Cirque du Soleil and Rhéa Sylvia Inc. are but two brief examples of how applied research can be transferred into learning curriculum for an innovative workplace. Yet they clearly illustrate that learning new technologies and applying them within the workplace environment constitutes the logical extension of research and development activities within the college and institute system. ■

EVENTS

ACCC Vice-Presidents' Symposium **Calgary, Alberta** **October 16-17, 2002**

ACCC will host a second Symposium for College and Institute Vice-Presidents. Both administrative and academic Vice-Presidents are invited to network with their peers from across the country and explore issues relevant to their important roles in the Canadian college and institute system. For more information, contact the ACCC Conferences and Awards Office at tel.: (613) 746-5916, fax: (613) 746-6174 or email: gmulhall@accc.ca.

VIII North American Higher Education Conference **Calgary, Alberta** **October 17-19, 2002**

The annual conferences of the Consortium for North American Higher Education Collaboration (CONAHEC)

enable key leaders and practitioners in higher education to address specific issues and create opportunities for bilateral and trilateral education collaboration. Held for the first time in Canada, the VIII Conference will be hosted by Mount Royal College in Alberta. Working with the theme, "North American Higher Education Collaboration: The Next Decade," conference participants will help shape the collaborative agenda in North American higher education and develop strategies to meet the challenges of the next decade. For more information, visit www.conahec.org/Conahec2002.

Developing Skills for the New Economy **Winnipeg, Manitoba** **October 17-19, 2002**

Hosted by the Canadian Centre for UNESCO's Project on Technical and Vocational Education (UNEVOC-Canada) and the Canadian Vocational Association (CVA), in

partnership with the UNESCO-UNEVOC Centre in Bonn, Germany, this International Conference on Technical and Vocational Education and Training will engage participants in a dialogue on the impact of the new economy on job and workforce development. All key stakeholders are invited to participate in discussions and critical reflection on international research, policy initiatives, case studies, best practices, innovative approaches and strategies to promote successful skill development in the new economy. For more information, visit www.umanitoba.ca/unevoc/2002conference/.

BCCIE Fall Institute
Vancouver, British Columbia
October 20-22, 2002

What are the key changes and challenges facing institutions in their internationalization efforts today and in the future? How are institutions creatively responding to opportunities and infusing internationalization into their campus, curriculum and community? The British Columbia Centre for International Education's Fall Institute will address these questions and much more. Participants from across Canada and around the world with responsibilities for developing, implementing, marketing, supporting, and managing international education are welcome to attend. With the theme, "Internationalization at a Crossroads: Changes, Challenges & Opportunities," the fourth Fall Institute will provide participants with the opportunity to engage in practical and interactive workshops, be challenged by new developments from international education experts and network with their colleagues. For more information, visit www.bccie.bc.ca/fi2002/overview.asp.

Twelfth Annual Strategic Enrollment Management Conference
San Diego, California, USA
November 10-13, 2002

Organized by the American Association of Collegiate Registrars and Admissions Officers, the Twelfth Annual Strategic Enrollment Management (SEM) Conference will enable participants to learn from experienced SEM practitioners at over 50 workshops, plenaries and sessions focused on creating viable, integrated enrollment management plans for educational institutions. For more information, visit www.aacrao.org/semXII/brochure.pdf.

National Consultation on Career Development (NATCON)
Ottawa, Ontario
January 20-21, 2003

The National Consultation on Career Development is a national event with international participation. Organized by the Canada Career Consortium, the 29th annual NATCON will address career development employment issues and provide an opportunity for members of both the public and private sectors to explore new theories, research and innovative approaches in all areas of career development and human resources. For more information, visit www.natcon.org.

ACCC Annual Conference 2003
Vancouver, British Columbia
May 25-27, 2003

The ACCC Annual Conference 2003 will be hosted by Vancouver Community College in cooperation with Capilano College, Douglas College, the Emily Carr Institute of Art & Design, Kwantlen University College and Langara College. The theme "Our Changing Landscape" addresses the challenge of maintaining college and institute missions and directions in a shifting and complex world. The student body, employee demographics and the entire community are changing so rapidly that colleges and institutes must strive to educate people to become citizens who are adaptable to change, culturally literate and socially competent. The 2003 ACCC Conference will explore how institutions can best respond and adapt to the changing world while remaining true to the community college philosophy. For more information, contact the ACCC Conferences and Awards Office at tel.: (613) 746-5916, fax: (613) 746-6174 or email: gmulhall@acc.ca.

See *ACCC International* (attached to *College Canada*) for more international events and conference listings.

Adult Literacy NOW! Complex, Multidimensional, and Transformative

With a foreword by Adrienne Clarkson, Governor General of Canada, *Adult Literacy Now!* is a richly complex portrayal of the multidimensional aspects of literacy instruction and the profound impact such instruction has on every family, school, workplace and community in Canada. Anyone involved in improving adult literacy through research, teaching or simply critical reflection will be transformed by the experiences shared by the writers in this volume. Lifelong learning is becoming addictive and the goal of this book is no less than the development of self-confident, sensitive individuals who can help each struggling but avid learner. To order, contact Irwin Publishing at www.irwinpublishing.com (348 pages, \$34.95, ISBN 0-7725-28632).

The Education-Jobs Gap Underemployment or Economic Democracy

Written by D.W. Livingstone, *The Education-Jobs Gap* won the John Porter Memorial Book Award in 1999. With chapters examining the knowledge of society, underemployment, lifelong learning and the knowledge economy, *The Education-Jobs Gap* makes interesting reading for policy-makers as well as academics. To order, contact Irwin Publishing at www.irwinpublishing.com (340 pages, \$29.95, ISBN 1-55193-017X).

Marketing Higher and Further Education An Educator's Guide to Promoting Courses, Departments and Institutions

Today's education-as-business environment means that many professionals working in higher and further education need developed business and promotional skills in order to ensure that their course, department or institution maximizes its potential. Student recruitment and retention, innovative course promotion and fund or sponsorship raising are just some of the competitive realities that academics and educators must tackle. Written by Dr. Paul Gibbs and Michael Knapp, two experienced educational marketers, *Marketing Higher and Further Education* provides business-oriented guidance that will meet the needs of everyone involved in the strategy or business of an educational institution, on either an academic or commercial basis. To order, contact Renouf Books at www.renoufbooks.com (147 pages, \$48.00, ISBN 0749432942).

Academic and Educational Development Research, Evaluation and Changing Practice in Higher Education

With a heightened emphasis on change, innovation and developing best practice in higher education, it is now essential that those involved in actually researching, developing or implementing new approaches to teaching and learning are informed by the experiences of others. *Academic and Educational Development* investigates changes to current practice, looks at how development is coming about, examines the research underpinning change and considers the impact of new approaches. Structured to reflect a range of contexts in which educational development is taking place, the book includes contributions from leading educational researchers and innovative teachers. With its broad scope, authoritative case studies and critical analysis, *Academic and Educational Development* will be important reading for researchers, teachers in higher education, educational developers, academics and managers concerned with teaching and learning policy. To order, contact Renouf Books at www.renoufbooks.com (224 pages, \$54.00, ISBN 074943533X).

Learner-Centred Teaching: Five Key Changes to Practice

Learner-Centred Teaching offers a comprehensive work on the topic of learner-centred teaching in the college and university classroom. As the author Maryellen Weimer explains, learner-centred teaching focuses attention on what and how the student is learning, the conditions under which the student is learning and whether he/she is retaining and applying the learning and how current learning positions the student for future learning. To help educators accomplish the goals of learner-centred teaching, this important book presents the meaning, practice, and ramifications of the learner-centred approach and how it transforms the college classroom environment. *Learner-Centred Teaching* shows how to tie teaching and curriculum to the process and objectives of learning rather than to the content delivery alone. Throughout the book, Weimer clearly illustrates the difference between teacher-centred and learner-centred instruction and offers practical strategies for creating learner-centred courses. To order, contact Renouf Books at www.renoufbooks.com (258 pages, \$53.50, ISBN 0787956465).

Sylvia Barnard was appointed President of Cambrian College. Formerly Vice-President, Academic at Georgian College, Mrs. Barnard's 25-year career in education has spanned all levels and has encompassed both classroom and administrative experience.



Yves Blouin was named Director General of Collège François-Xavier-Garneau for a five-year mandate. Mr. Blouin held the position of Vice-President, Academic at the Collège since 1990 and was also President of the Academic Affairs Commission of the Fédération des cégeps for three years.



Ann Buller-Caron has been named Acting Vice-President Academic and Chief Learning Officer at Nova Scotia Community College. Ms. Buller-Caron will be responsible for the full-scale implementation of the College's comprehensive Portfolio Learning Model. As Vice-President Students, she recently led the transformation of NSCC's Student Success Services. Previously, Ms. Buller-Caron served in senior education leadership roles at several Ontario colleges.

Marcel Côté is the new Director General of Collège Laflèche. Formerly Director of the College Sector of the Séminaire du Sherbrooke, Mr. Côté replaces retiring Director General Guy Vachon.



The Government of Québec nominated **Lucille Daoust** as Director General of the Institut de tourisme et d'hôtellerie du Québec for a five-year mandate replacing Christine Martel.

Richard Doiron was named Principal of New Brunswick Community College - Edmundston. Mr. Doiron has worked at the College for the last 21 years, eight as a teacher and 13 as an administrator. Mr. Doiron replaces retiring Principal Michel Laroche.



Céline Durand is the new Director of the Collège constituant de Terrebonne campus of Cégep régional de Lanaudière.

Former Dean of the School of Foundation, **Monique Fouquet** is the new Vice President, Academic at the Emily Carr Institute of Art & Design. In addition to her knowledge of the Institute, Ms. Fouquet is an active member of the art community as well as the Executive of the Association of Women in Post-Secondary Education in British Columbia.



Elizabeth (Betty) Freelandt was appointed Vice-President, Student Services and Strategic Initiatives at Cambrian College. Ms. Freelandt joined the College in 1980 and has held a variety of academic and administrative positions with the most recent being Dean of Business, Media and Information Technology.



Michelle Gallant was appointed Director, Marketing and Communications at Nova Scotia Community College. An accomplished marketing and communications professional with extensive experience in the public and private post-secondary sectors, Ms. Gallant has executive responsibility for the College's brand marketing and organizational communications.



Formerly Vice President, Academic at Sault College, **Tony Hanlon** is the new President of Lambton College, replacing retiring President Terence Blundell. Mr. Hanlon has over 20 years of successive experience in training, counselling and education.

Appointed the new Chief Operating Officer of the Open Learning Agency, **Bill Harlan** will also continue to fulfil his responsibilities as Vice-President, Business Affairs.

James Henderson was named President of Grande Prairie Regional College. Formerly Vice-President of Resources and Chair of the Executive Committee at Grant MacEwan College, Mr. Henderson has a career-long commitment to education, with 11 years of senior leadership experience in Alberta colleges.



... cont'd on page 16

... cont'd from page 15



Mike Hill was appointed Principal of the Pictou Campus of Nova Scotia Community College. He is a former department head at the Truro Campus with a portfolio that included business, academic upgrading and communications arts programs. Before joining NSCC, Mr. Hill spent 15 years working in various faculty and administrative positions at Georgian College.

The Board of Directors appointed **Monique Laurin** as the new Director General of Collège Lionel-Groulx. Ms. Laurin brings almost 30 years of experience in education to her new post, along with a strong sense of leadership and community involvement.



The former Executive Director of the Centre for Women in Business at Mount Saint Vincent University, **Dr. Daurene Lewis** was named Principal of the Halifax Campuses of Nova Scotia Community College (NSCC). Dr. Lewis joins NSCC with a proven track record of managerial, advocacy and relationship-building experience, having built an impressive 30-year career in health care.

Graham MacDermott is the new Principal of the Akerley Campus of NSCC. With a 20-year career at NSCC, Mr. MacDermott has worked in various positions including acting principal, faculty member, student services officer and department head of the School of Applied Arts and New Media and the School of Health and Human Services.

David MacLean was appointed Principal of the Marconi Campus of NSCC. A former Athletic Director at the University College of Cape Breton, Mr. MacLean's experience includes a proven record of effective leadership and the development of strong community relationships.

The Board of Directors of the Saskatchewan Institute of Applied Science and Technology (SIAST) appointed **Dr. Bob McCulloch** as President, replacing Dr. Art Knight. Dr. McCulloch has an extensive background in post-secondary education and is the former Associate Vice-President of Administration and Secretary at the University of Regina. His experience in long-range planning and his track record in building partnerships are ideally aligned with SIAST's approach to meeting skills-training needs.



Graham Mickleborough was appointed President and Chief Executive Officer of Southeast Regional College. With over 20 years of experience in senior management positions, Mr. Mickleborough has been involved with projects at the local, provincial, national and international levels. His experience in community development and his understanding of issues facing rural Saskatchewan will assist the college in maintaining and building its network of business, community and industry partnerships.

The Board of Directors of Yukon College named **Janet Moodie** as acting President of the College from August 2002 to July 2003 replacing College President Sally Webber during her sabbatical leave. With 17 years of experience in territorial government, Ms. Moodie is a former Assistant Deputy Minister in the Yukon Department of Economic Development.

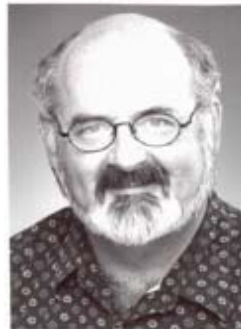


Ginette Ouellette is the new Director General of Collège de l'Outaouais. Ms. Ouellette is the former Vice-President, Academic at Cégep Lionel-Groulx and possesses 30 years of experience in post-secondary instruction and administration.

Dr. Terry Piper was appointed as the interim President and CEO of the Open Learning Agency. Dr. Piper will also continue to fulfil his duties as Vice-President, Education and as Provost.

Jean M. Poirier was named to the position of Director General of Cégep régional de Lanaudière replacing retiring Director General Donald Fortin. Formerly Director of Human Resources with the Cégep, Mr. Poirier was also a director of the board responsible for the establishment of the Collège constituant de Joliette campus.

Kevin Quinlan was named Principal of the Truro Campus of Nova Scotia Community College. With 18 years of experience as an instructor, vice-principal and principal in Newfoundland and Labrador's system of colleges and institutes as well as six years as a director and professor of education at the University of Regina, Dr. Quinlan brings a wealth of experience in post-secondary education to his new position.



Barbara Taylor was appointed President of Canadore College and brings a wide breadth of experience in the field of post-secondary education and a strong record of achievement to the position. Ms. Taylor was Vice-President of Academic and Student Services at the College for four years.

