

A PORTRAIT OF WORK-RELATED LEARNING IN QUEBEC

WORK AND LEARNING

Knowledge Centre

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LIST OF ABBREVIATIONS AND ACRONYMS

AETS	Adult Education and Training Survey
ALT	Adult learning and training (or job-related adult learning and training)
CLE	Local employment centre
CPMT	<i>Commission des partenaires du marché du travail</i> [Commission of Labour Market Partners]
CRPMT	<i>Conseil régional des partenaires du marché du travail</i> [Regional Council of Labour Market Partners]
CSMO	<i>Comité sectoriel de main-d'œuvre</i> [Sectoral Labour Force Committee]
CSST	<i>Commission de la santé et de la sécurité du travail</i> [Workers' Compensation Board]
FNFMO	<i>Fonds national de formation de la main-d'œuvre</i> [National Labour Force Training Fund]
GMP	Good manufacturing practices
HACCP	Hazard analysis critical control point
MELS	<i>Ministère de l'Éducation, du Loisir et du Sport</i> [Department of Education, Recreation and Sport]
MESS	<i>Ministère de l'emploi et de la Solidarité sociale</i> [Department of Employment and Social Solidarity]
MICC	<i>Ministère de l'Immigration et des Communautés culturelles</i> [Department of Immigration and Cultural Communities]
PAMT	<i>Programme d'apprentissage en milieu de travail</i> [Workplace Apprenticeship Program]
PRIIME	<i>Programme d'aide à l'intégration des immigrants et des minorités visibles en emploi</i> [Employment Integration Program for Immigrants and Visible Minorities]
ROFQ	<i>Regroupement d'organismes en francisation au Québec</i> [Organization of francization agencies in Quebec]
SMEs	Small and Medium Sized Enterprises
WALL	Working and Lifelong Learning Survey

INTRODUCTION

Work-related Adult Learning and Training (ALT) has become a major phenomenon in Quebec, especially since the passage of the *Act to foster the development of manpower training* in 1995. Structured, work-related ALT alone involved more than one adult in five in 2002.¹ As in Canada as a whole, one-third of employed Quebecers took part in structured work-related ALT activities in 2002, a steady increase from 1997². In so doing, they closed the substantial gap that had existed with the rest of Canada in 1997³ (Statistics Canada, 2003). What is more, close to 80% of this work-related ALT is now sponsored by employers.⁴ In short, Quebec has experienced substantial growth in ALT over the last decade.

Despite this progress, no overall quantitative or qualitative assessment has been carried out recently, aside from administrative reports by the various agencies involved,⁵ statistical studies⁶ and research focusing on particular situations⁷. This dearth is all the more glaring in light of Quebec's unique situation in Canada. Drawing on the existing data, this paper provides an initial and essentially descriptive overview of the adult learning and training that is provided in firms in Quebec.

In order to create this overview of ALT in Quebec firms, we shall first consider the specific context, namely the various parties involved in ALT (chapter 1) and the unique legislative framework in Quebec (chapter 2). Then, we shall examine the impact of the *Act to foster the development of manpower training* through the lens of the companies subject to the Act ("Bill 90") and some of the effects that can be observed since its enactment in 1995. The third part of this report describes the groups that are under-represented in work-related ALT and the likely obstacles to their participation.

Chapter 4 describes in broad outline the organization of ALT in firms and then indicates which types of adult learning and training are favoured by companies, making a distinction between structured ALT and the recognition given to informal learning. The structure of ALT also includes actions that occur prior to the immediate organization of learning and training, such as the expression of demand, as well as subsequently in the form of evaluation and follow-up activities (Chapter 5); we shall see precisely how important these last two, still emerging, aspects are. Following this general overview, no comparative evaluation or analysis will be attempted by way of conclusion. Rather, an attempt will be made to discern the main trends, the questions at issue and topics for future research in order to facilitate the necessary supra-regional and trans-national analyses in the future.

¹ 22% participation rate, see Table 4.1.

² Significant difference of 12 percentage points 1997-2002; see Table A.1.

³ Significant difference in 1997 of 18 percentage points between Quebec and Canada; see Table A.1.

⁴ See Table 4.3.

⁵ See the various annual reports and balance sheets of the Direction du Fonds national de formation de la main-d'œuvre (2000 to 2006, for example, in the Bibliography).

⁶ Refer to the studies published by Statistics Canada (2003, *inter alia*, in the Bibliography).

⁷ For example, research such as that conducted by Dunberry (2006), Lesemann (2005), and others.

1 THE CONTEXT OF ADULT LEARNING AND TRAINING IN FIRMS IN QUEBEC: THE ACTORS

The actors involved in Work-related Adult Learning and Training (ALT) are numerous and interconnected. A schematic representation of the network of actors involved in such ALT, including government bodies, will give readers a summary understanding of the many ramifications and responsibilities of this active network. Our report accordingly focuses first on the network in order to clarify the galaxy of actors involved in ALT in firms in Quebec. Figure 1.1 situates the organizations referred to in the statistics and the legislative framework that will be featured in the remainder of this report.

1.1 Firms

There are two groups of providers of company training: in-house ALT providers and outside providers.

1.1.1 In-house ALT providers

The position of in-house ALT providers is only now emerging in Quebec. In large firms, two types of actors must be distinguished. In medium-sized enterprises, the head office plays an important role since it has an ALT department providing support for the activity. Some even go so far as to establish a corporate university. At the local level, these large firms maintain in-house ALT services in each of their branches. The nature of the knowledge and skills in question is closely reflected in the ALT structure favoured by the organization. The new complex reality that now structures work-related adult learning and training into “soft” skills and technical skills should be highlighted.

There is a gap between the provision of ALT for managers and that for technicians or operators, and this gap has been poorly studied to date. There is a tendency in firms to centralize ALT organization and decision-making around soft skills and to decentralize it with respect to technical skills. Some continuing ALT departments within firms have full-time trainers on their staff. Besides these accredited in-house trainers, a new key player has appeared in recent years in firm-based ALT: trainers who are also employees. To be sure, coaching and mentoring are not new on the company training scene. Clearly, the emergence of ALT in the form of mentoring (Houde, 1995⁸) is not a new idea; what are new are its dissemination and the systematic form it has taken. Between the relatively brief and spontaneous involvement of a coach to provide accelerated ALT for newly-hired employees and an approach to mentoring based on prior training of the employee-trainer and on the planning of the mentor-mentoree relationship, there lies a broad spectrum. This type of in-house ALT, based on an interpersonal relationship of support, exchange and learning focusing on specific objectives, tends to predominate.

⁸ <http://www.mentoratquebec.org/>

Bélanger, Larivière and Voyer (2004) observed a trend: staff training in production units is provided primarily through an employee-trainer who has been systematically trained for that purpose in both the retail sector – because of the shift in roles from salesperson to adviser – and the food processing and biopharmaceuticals sectors, especially in establishments that report to a head office and where ALT responds to the immediate imperatives of quality standards. We shall examine this point in greater detail in Chapter 4.

1.1.2 Outside ALT providers

An initial picture of outside ALT providers may be found in the list of persons eligible to become ALT providers in the *Act to foster the development of manpower training*, namely some 5,000 individual or organization providers recognized by the Commission des Partenaires du Marché du Travail (CPMT). The Act refers to various public education institutions recognized by the Department of Education, Recreation and Sport (MELS), and individual trainers or organizations providing ALT that are recognized by the CPMT and are associated with consulting firms, ALT organizations, professional associations or adult and continuing education services. The accreditation procedure has different requirements:

- a form may be used to submit an application to Emploi-Québec
- certain conditions must be met, including for example the requirement of a minimum of 135 hours' training in teaching methods, at least 250 hours' of experience as a training instructor or a minimum of 90 hours of training in teaching methods and at least 100 hours of experience as a training instructor.⁹

It is certainly not possible to draw a portrait of outside providers without referring to other specialized organizations such as health and safety committees that are not necessarily accredited by the CPMT for the purposes of Bill 90 but that have been active for a very long time in providing ALT.

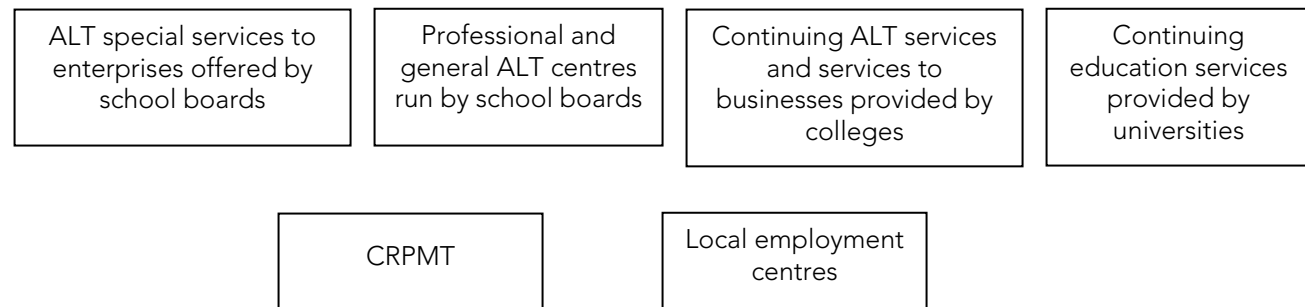
⁹ This condition is set out in the Regulation respecting the accreditation of training bodies, training instructors and training services, under the *Act to foster the development of labour force training*. (www.publicationsduquebec.gouv.qc.ca)

Figure 1.1 The Actors Involved in ALT in Quebec

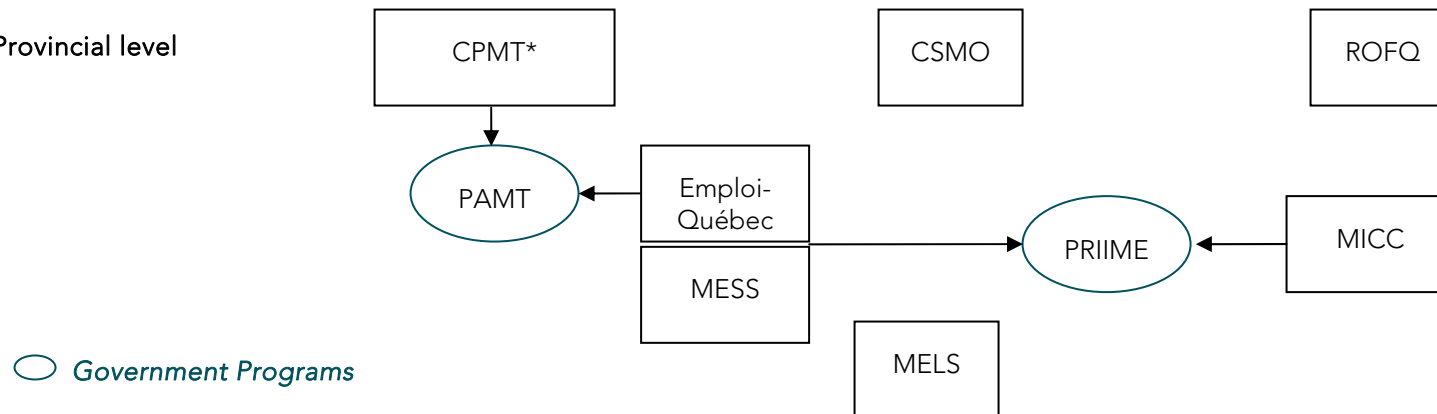
1. Companies



2. Regional level



3. Provincial level



○ Government Programs

* The CPMT consists of members representing government, employers, unions and the social economy. Please refer to the list of abbreviations and acronyms at the beginning of this report for definitions of the acronyms in this diagram.

Suppliers of products for retail sale, examined by Bélanger et al., 2004, or of equipment for the industry as a whole are omnipresent. All retail businesses use suppliers as training providers, but only a minority add in-house ALT to this product training because of the need for a critical assessment of the products in order to provide better customer service. In the other sectors examined by Bélanger et al., 2004, equipment suppliers tend to have the sales contract include staff training in the handling of new machinery. In some cases, suppliers of new equipment can be responsible for nearly half of ALT given to the staff operating the equipment.

Second in importance among outside actors are consulting firms which are regularly involved in ALT for managers in the great majority of the firms examined by Bélanger et al. (2004). Some companies also make use of them in order to train their trainers. Consultants may also be called upon to help analyse needs, prepare human resources development plans, evaluate ALT and provide specific training in a particular technique for special groups of employees. In some of the companies featured in the study by Bélanger et al. (2004), they are given responsibility for organizing annual ALT days. Consulting firms are also called upon for help in the introduction of new technologies.

Professional associations, merchants' associations and professional governing bodies are also active in ALT, producing such things as training tools, workbooks on sales skills and a prior learning assessment guide by the *Société de formation et d'éducation continue* (Sofeduc). Sectoral workforce committees are also playing an increasingly important role in this regard; we shall look at their activity in a special section (section 1.3).

In Quebec there is no professional body representing ALT providers per se, although organizations such as the *Quebec Ordre des conseillers en ressources humaines agréés et en relations industrielles agréés* [Order of Chartered Human Resources and Industrial Relations Advisors of Quebec] (CRHA and CRIA), count among their members many trainers and providers. In its mission statement, the *Ordre des CRHA et CRIA* says that its goal is to "improve the quality of professional practice through the professional development and accreditation of its members".¹⁰ Note that in 2005-2006, one of the four initiatives supported by the CPMT under the *Act to foster the development of manpower training* was the conferences organized by the *Ordre des CRHA et CRIA* (Direction du FNFMO et CPMT, 2006).

Educational institutions also constitute an actor, and are recognized by all firms. The *Services aux entreprises* (SAE), a Quebec business services network involving school boards and CEGEPs, adult education and continuing training services, which are active in each school board and CEGEP in the province, and continuing education services in universities, are just some of the ways that public education institutions have responded to firms' demand. In some of the firms examined by Bélanger et al. (2004), the policy of reimbursing students for their fees applies to managers in particular and sometimes to all staff. Some technicians, for example, take advantage of this policy to enrol in

¹⁰ Quote taken from the Website of the Ordre: <http://www.orhri.org>

professional programs¹¹ offered in nearby CEGEPs. Some companies facilitate access by their staff to basic education provided by school boards. Finally, it should be noted that firms regularly make use of institutions of higher education for research, especially in order to create new products or to conduct ergonomic studies of workstations and the learning that occurs there.

1.2 Regional actors

1.2.1 *The Conseils régionaux des partenaires du marché du travail*

A mechanism that is unique to Quebec, the 17 *Conseils régionaux des partenaires du marché du travail* [Regional Labour Market Partners Councils] (CRPMT) are relied on by firms and other regional networks for the analysis of workforce education and training needs. Thus, each region in Quebec has a CRPMT, where consultations take place to “examine problems in the region and recommend to the *Commission des partenaires du marché du travail* an action plan that takes local needs into account” (translation). The CRPMTs are also responsible for adapting the measures and services provided by Emploi-Québec to meet the needs of the region.¹² Although the *Conseils*

Quebec’s Regional Councils of Labour Market Partners (CRPMT)	
1. Abitibi-Témiscamingue	9. Lanaudière
2. Lower St. Lawrence	10. Laurentians
3. National Capital	11. Laval
4. Central Quebec	12. Mauricie
5. Chaudière-Appalaches	13. Montérégie
6. North Shore	14. Montreal
7. Eastern Townships	15. Northern Quebec
8. Gaspé – Magdalen Islands	16. Outaouais
	17. Saguenay-Lac-Saint-Jean

régionaux were established under the Act and the members are appointed by the Minister of Employment, their mandate is more to consult than to make decisions.

1.2.2 Local employment centres

The 150 or so local employment centres (CLEs) scattered throughout Quebec provide assistance and tools to facilitate job searches and entry or re-entry into the workforce. Their role is to direct people toward the education and training that meet their needs, and toward the appropriate institutions, including school boards. In its presentation, the *Ministère de l'emploi et la solidarité sociale* [Department of Employment and Social Solidarity] states:

¹¹ The programs credited at the college level are college diplomas or certificates (DECs or AECs).

¹² http://emploi.quebec.net/francais/organisation/commpartenaires/conseils_regionaux.htm

A CLE includes a reception service, a multi-service room and financial assistance services. Employment services are also provided in most CLEs. Each of them provides resources and services:

- to people who need employment or last resort assistance,
- to employers who have job openings and who have questions about the labour force and skills development.¹³

1.3 Actors at the Quebec level

1.3.1 Emploi-Québec

Together with its partners in the labour market, Emploi-Québec provides services designed to facilitate integration into society and professions and maintenance, stabilization and creation of jobs by promoting the development of continuing education and training.

Emploi-Québec is an agency (independent unit) within the Ministère de l'Emploi et la Solidarité sociale (MESS) that grew out of the merger in 1998 of various employment and labour force services. Under the Canada-Quebec Labour Market Agreement, which took effect in January 1998, Quebec assumed responsibility for active employment measures to be provided to employment insurance recipients as well as for certain functions of the National Placement Service, which may be accessed by users of employment insurance. These measures and functions are funded by the Employment Insurance Fund, for which the federal government is responsible.¹⁴

The preferred approach here of coordination (in French, “concertation”) among government, employers and unions is recent in the Quebec context because “in the early 1990s, besides the lack of employer investment in education and training, a low level of partnership was also observed” (Charest, 2007a, p. 233; transl.). Emploi-Québec partners with the *Conseils régionaux*, the *Comités sectoriels* and the *Commission des Partenaires du Marché du Travail* (CPMT); these institutions will be examined in the following sections. More specifically, Emploi-Québec administers the CLEs and manages the funds of the CPMT. Emploi-Québec accordingly plays an important role in work-related ALT in Quebec. And it is substantially involved with the *Fonds national de développement des compétences de la main-d’œuvre* [Labour Force Skills Development fund], as well as with Bills 90 and 5.

¹³ <http://www.mess.gouv.qc.ca/services-a-la-clientele/centre-local-emploi/>

¹⁴ <http://emploiuebec.net/anglais/organisation/index.htm>

1.3.2 The *Comités sectoriels de la main-d'œuvre*

The 30 sectoral workforce committees (CSMO) in Quebec,¹⁵ similar to the Canadian sector councils, are active in establishing skills standards or professional standards and thus helping to define the demand for initial and continuing education and training in each sector. Firms also tend to use the sectoral committees to circulate information, identify existing and future skills and facilitate links between innovation initiatives or projects (Charest, 2002).

Some CSMOs are unique to Quebec while others were created or exist across Canada, for example in the textile or tourism sectors. The committees that arose out of the 1995 policy on support for industry have developed unequally, since some used to be active under other names before the CSMOs were established.¹⁶ Most CSMOs started work when Bill 90 became law,¹⁷ while others were established more recently.¹⁸ According to Tremblay, Doray and Landry (2000), the time when a sectoral committee is established has an impact on the involvement of this committee in ongoing ALT: “the most recently established committees have not yet diversified their activities” (p. 71; transl.). Against the significant challenge posed by the policy, Charest (2003) emphasizes the rapid and surprising success the CSMOs have achieved: “Who would have believed that, after only a few years of existence, 26 sectoral committees¹⁹ would consistently mobilize more than 300 private partners in the

Quebec's Sectoral Labour Force Committees (CSMO)	
1. Aerospace	16. Textile industry
2. Forestry development	17. Metal-working
3. Rubber	18. Sea fishery
4. Chemicals, petrochemicals and refining	19. Plastics
5. Retail commerce	20. Doors and windows, furniture and kitchen cabinetry
6. Food industry	21. Agriculture
7. Graphic communications	22. Pharmaceuticals and biotechnology products
8. Culture	23. Car services
9. Social economy and community action	24. Personal care
10. Environment	25. Information and communication technologies
11. Industrial metal manufacturing	26. Tourism
12. Ornamental horticulture	27. Food processing
13. Electrical & electronics industry	28. Wood processing
14. Shipping industry	29. Railway industry
15. Mining industry	30. Road transport

¹⁵ 30 CSMOs including the mining industry sectoral group.

¹⁶ Including the *Centre d'adaptation de l'aérospatiale* [aerospace workforce adjustment centre] in Quebec, which was established in 1983.

¹⁷ Between 1995 and 1997, no fewer than 15 CSMOs were established.

¹⁸ Since 2003, new CSMOs have been established, including those for ornamental horticulture and the shipping industry.

¹⁹ At the time of publication (Charest, 2003), there were 26 — not 30 — sectoral committees.

labour market, in a sustained fashion, for their management in a union-management structure in which everything is based on the voluntary involvement of these 'pioneers' of sectoral involvement" (p. 64; transl.)?

The CSMOs prepare requests for ALT and ensure that certain types of adult learning and training are provided (their activities do not involve initial education). However, despite relevant upstream work, Tremblay et al. (2000) noted at that time that "the committees invest little in activities that take place subsequent to education and training, that is to say in practices relating to the evaluation of their actions in the training field" (p.72; transl.). This situation may have changed more recently. The CSMOs also have the task of promoting *mutuelles de formation* — "training mutuals," or pooled ALT associations for small and medium size enterprises (SMEs).²⁰

From the start, CSMOs have had the task of facilitating coordination between firms and ALT providers, and assessing labour force needs in their sector. Consultation is a central issue in CSMOs (Charest, 2006). Today, CSMOs must also define professional norms or standards, in particular through skills recognition. "Professional standards present the essential skills and conditions required for engaging in various trades, professions or employment functions."²¹ At present, more than 34 professional standards are in force, including those for machinist-moulders and fishmongers;²² 17 others are in development. A professional standard enables workers to have their skills recognized through a certification of professional qualifications. According to the *Groupe de travail de la CPMT* (2006), "between April 1, 2002 and November 30, 2005, more than 9,000 agreements on qualification were signed and just over 3,000 workers obtained certification" (p.3, transl.). There is also interprovincial certification as part of the *Red Seal* program,²³ which allows workers to have their skills in their trade recognized across Canada, to encourage mobility. This involves trades such as pastry chefs, machinists and hairdressers.

We should note the unique situation of the *Commission de la construction du Québec*, which, as a result of an effective and original mechanism,²⁴ constitutes an independent system (Charest and Dubeau, 2003):

For almost ten years, the construction industry has had two training funds, the Plan de formation du secteur résidentiel and the Fonds de formation de l'industrie de la construction (FFIC) for the three non-residential sectors. Thanks to employer contributions, these funds now contain a total of more than \$100 million and, among other things, assume all direct and indirect costs (travel and room and board) for workers in training, thus creating an additional incentive for construction workers to engage in upgrading.

²⁰ As it denotes a relatively new concept outside of Quebec, the term "mutuelles de formation" has been preserved throughout this report in its original French expression.

²¹ http://emploi.quebec.net/francais/individus/qualification/registre_competerences.htm

²² 23 professional standards are available, according to the Emploi-Québec site, 26 according to a document issued by the Groupe de travail de la CPMT (2006).

²³ http://www.sceau-rouge.ca/Site/index_f.htm

²⁴ A contractor is required to pay the Fund \$0.20 per hour worked by each of its employees.

This approach seems to be bearing fruit, since the number of individuals trained and the sums invested by the two training funds have grown constantly every year.²⁵

1.3.3 The *Commission des Partenaires du Marché du Travail*

The *Commission des Partenaires du Marché du Travail* (CPMT), established under the *Act to foster the development of manpower training* in Quebec, is a province-wide consultative body that includes all parties involved in the labour market: employers, unions, the social economy and Emploi-Québec. Unique to Quebec, the CPMT provides an interface between the provincial government and the partners directly affected by changes in employment and the workforce. It advises the Minister, helps define the approaches to be taken by Emploi-Québec, defines the conditions for the application of the *Act to foster the development of manpower training* and provides a framework for the development of various skill-recognition tools. While the CPMT does not have a mandate to administer Bill 90, its role is not simply advisory, because it suggests approaches and is the body that makes decisions concerning the criteria for the award of contributions from the *Fonds national de formation de la main-d'oeuvre* (FNFMO). The CPMT also takes part in research in the field through its applied research grants fund of \$10 million, which is managed by the government but distributed on the basis of recommendations for relevance made by the CPMT and of academic standards by academic peers.

The CPMT played an important role in renewing the apprenticeship scheme when the *Programme d'apprentissage en milieu de travail* [Workplace apprenticeship program] (PAMT) was put in place as an alternate pathway for work-related learning and skills recognition. In 2001, the Commission also adopted the *Cadre général de développement et de reconnaissance des compétences* [Workforce skills development and recognition framework] to better adjust the development and recognition of skills to the realities of different areas of economic activity. Among the framework's strategies, we should note the *Programme d'apprentissage en milieu de travail*, the development of professional standards and the relevant tools, and the accreditation of professional qualifications. In various ways, the framework involves MESS, the CPMT, Emploi-Québec, the CSMOs, unions and employers. For example, the development of professional standards is the responsibility of the CSMOs, whereas the funding and validation of these standards is the responsibility of the CPMT, while the accreditation of qualifications is the responsibility of the MESS and the CPMT, etc.

The following extract from the major issues webpage of the CPMT indicates some of the directions taken by this organization in the period 2006-2008:

²⁵ http://www.ccg.org/Accueil.aspx?sc_lang=en&profil=Medias

- ▶ Promote worker qualification by boosting cooperation between educational and labour market organizations, notably in order to bring labour market in line with training opportunities
- ▶ Promote worker qualification via sector-based labour force committee action and the ongoing development of the Workforce skills development and recognition framework
- ▶ Promote relations with the federal government
- ▶ The implementation of the Act to promote workforce skills development and recognition.
- ▶ Contribute to strategies and policies that affect the labour market: government policies on adult and continuing education, government employment plan, integration of immigrants into the job market, strategy targeting workers 45 and over and sustainable development policies.²⁶

1.3.4 *The Ministère de l'Éducation, du Loisir et du Sport*

The *Ministère de l'Éducation, du Loisir et du Sport* ["MELS"; Ministry of Education, Recreation and Sport] plays several roles in work related education and training in Quebec:

- ▶ first, through basic general education given in 200 adult education centres run by the school boards, the continuing education services of CEGEPs and the business services of secondary school/college networks;
- ▶ second, through not only initial professional education but also continuing professional education in the vocational education centres²⁷ of the school boards
- ▶ third, through initial training via college technical education and through the ALT provided by the continuing education services of Quebec's 48 CEGEPs.

The MELS acts as one of the two main departments involved in the 2002 *Government Policy on adult education and continuing education and training*, which is currently being revised with a view to adoption of a new *Action Plan* for 2008-13 in June 2008. This revision of the policy centres on four themes: basic education, work-related adult learning and training, recognition of prior learning and skills, and shared responsibility for funding ALT.

MELS is also a member of the CPMT. As a key partner in this context, it encourages its own institutions to develop continuing education and training services.

One of the six thrusts of the MELS Strategic Plan 2005-2008 is to strengthen adult education and training, primarily in order to "develop a culture of continuous training

²⁶ http://www.cpmt.gouv.qc.ca/grands-dossiers/index_en.asp

²⁷ Most of the students at these Centres are over 20 years of age.
<http://www.fcsq.qc.ca/Commissions/Role/stat1.html>

(...) in Quebec” (transl.). The question raised by this approach is the recognition and validation in Quebec society of education and training “that meets the various needs (...) of adults and is geared to the realities of the current and future labour market” (MELS, 2005, p.16, transl.).

1.3.5 The *Ministère de l’Immigration et des Communautés culturelles*

MICC, the *Ministère de l’Immigration et des Communautés culturelles* [Ministry of Immigration and Cultural Communities] is a partner in the *Government policy on adult education and continuing education and training*. It plays a role in ALT in Quebec with respect to the recognition of diplomas earned abroad and the administration of agreements with various countries to facilitate and encourage education and training and the entry of immigrant groups into the workforce. MICC, in co-operation with Emploi-Québec, administers a policy for the learning of French as a second language in workplaces.

A number of programs and activities have been established by MICC, including the *Programme d’aide à l’intégration des immigrants et des minorités visibles en emploi* [Employment Integration Program for Immigrants and Visible Minorities], PRIIME, which, on the one hand, supports small and medium-sized enterprises (SMEs) in hiring and training immigrant employees and adjusting their human resources structure to meet the particular needs of these employees and, on the other hand, supports immigrants in obtaining and retaining jobs that reflect their skill levels. Through the PRIIME program, which was established in 2005, MICC and MESS provide financial assistance and logistical support for companies and immigrants (MICC, 2005). These education and training initiatives are to be commended. A sectoral committee devoted to immigrants, the *Comité d’adaptation de la main-d’œuvre – personnes immigrantes* (CAMO-PI) [Workforce Adjustment Committee for Immigrants], also provides links between the MICC and the workplace.

In conjunction with MICC, the network of non-governmental organizations for French second language education in Quebec is mandated to: “support member businesses in their efforts and activities to provide quality services in the area of socio-linguistic integration”²⁸ (transl.). This organization, which emerged from the community sector itself, has 45 members.

²⁸ <http://rofq.com>

2 THE POLITICAL AND LEGISLATIVE FRAMEWORK OF WORK-RELATED ADULT LEARNING AND TRAINING IN QUEBEC

Work-related adult learning and training in Quebec has been marked since 1995 by the passage of the *Act to foster the development of manpower training*.²⁹ This Act, which has been implemented gradually in line with the size of the companies affected,³⁰ requires employers to invest 1% of their total payroll in the provision of education and training for their staff. Companies that do not report such investments must pay the same amount to the Department of Revenue. The moneys contributed by firms that have not invested the minimum required amount in ALT are deposited in a special fund, the *Fonds national de formation de la main-d'oeuvre* [National Labour Force Training Fund], FNFMO, which is co-managed by government and labour market stakeholders under the aegis of the *Commission des partenaires du marché du travail*. These moneys are used to fund innovations or initiatives that promote ALT innovations and projects in firms and sectoral committees, as well as a research program, all on the basis of proposals made by members of the CPMT. Firms, sectoral committees and researchers can submit requests for grants, which may be accepted or refused in light of specific criteria (see 3.2) and in light of grant maximums for each sector.

As the Act was gradually implemented, some 36,000 companies were supposed to meet these requirements and more than 75% of them did. An amendment in January of 2004 exempted all businesses with a total payroll of under \$1 million from this obligation, freeing some 25,000 companies from making the payment.³¹ Since this funding is also being implemented gradually, only those companies whose total payroll is more than \$1 million received grants from the fund in the early years of the program. In 2005, more than 11,500 employers were subject to Bill 90 (Direction du FNFMO, 2006).

What is the significance of this transformation of the institutional environment in ALT? The quantitative assessment contained in the next chapter will shed light on the scope of Bill 90.

2.1 Bill 5: Amending Bill 90

Bill 5 – *An Act to amend the Act to foster the development of manpower training and other legislative provisions*, which was passed in June 2007, is scheduled to come into force in January 2008. The innovative aspect of Bill 90, which lies in the partnership created among employers, government, unions and the social economy, is naturally retained in Bill 5. The financial aspects of Bill 90 are also retained as they now stand,

²⁹ *Act to foster the development of manpower training*, R.S.Q., c. D-7.1.

³⁰ The legislation was applied in three successive stages: first, in 1996 in companies whose total payroll was \$1 million and over, then in companies whose total payroll was between \$1 million and \$500,000 and, finally, in companies whose total payroll was between \$500,000 and \$250,000.

³¹ A regulation was made for this purpose on November 22, 2003, after an announcement appeared in the *Gazette officielle* on October 8, 2003.

including the exemption of companies whose total payroll is less than \$1 million (see section 2.3.1). There is a threefold thrust to the amendments introduced in by Bill 5: an enhanced role for CSMOs and the CPMT, expansion of the *Cadre général de développement et de reconnaissance des compétences de la main-d'oeuvre*, and funding for the development of *mutuelles de formation* ("training mutuals") for SMEs.

Bill 5 clearly emphasizes the development and recognition of workforce skills, formal ALT being only one of the preferred means of attaining this objective. One of the challenges is to cope with the increasing demand from workers, given the increasing precariousness of their jobs, to protect their right to work through access to broader continuing education and training and through recognition of their skills in a way that permits internal flexibility and greater mobility within a given sector of the economy.

The aim of a more qualified workforce requires a more intense application of the *Cadre de développement et de reconnaissance des compétences* and establishment of professional standards that meet the needs of sectors. The definition of professional standards and the creation of the related tools are the tasks of the CSMOs, whose role will be intensified and whose operations will be funded by grants from the FNFMO.

The third amendment relates to support for the development of *mutuelles de formation* —'training mutuals,' or pooled ALT associations for SMEs. The CPMT, which was very involved in updating Bill 90, concerns itself with the competitiveness of Quebec businesses, and the development of the *mutuelles* is a favoured tool for this purpose. ALT in small businesses is facilitated through their networking, and the *mutuelles* were already encouraged under Bill 90. Bill 5 states that funding will be provided to develop these *mutuelles* in a way that encourages their growth.

Another avenue of change proposed but not adopted in Bill 5 was a measure to fund individual job-related adult learning and training initiatives that are not necessarily included in specific company ALT plans. Some partners would like to see individuals benefit from the FNFMO for their personal job-related education and training endeavours, with the goal of enhancing mobility and individual continuing professional development. This proposal has not been accepted at this time but is being studied to determine its value and to obtain support for its adoption.

2.2 The Government Policy on Adult Education and Continuing Education and Training

The adoption in May 2002 of the *Politique gouvernementale d'éducation des adultes et de formation continue: Apprendre tout au long de la vie* [Government Policy on Adult Education and Continuing Education and Training — A Lifelong Journey] marked an important change in the role to be played by government in the field of adult learning and training. This was the first time that several ministries, particularly Education and Employment, officially combined their separate policies on adult education and training into a single government policy.

In this policy, priority is given to making employed adults and their employers more aware of the importance of investing in, maintaining and enhancing skills and to supporting those segments of the adult population lacking professional qualifications that would allow them to obtain basic education. Public employment services and local employment centres, like the network of adult education centres or continuing education services of educational institutions, have an important role to play in implementing this *Government policy*.

The policy focuses on four major interrelated approaches that define priorities for action:

- ▶ providing basic education for adults in Quebec;
- ▶ maintaining and upgrading adults' competencies (the challenge of anchoring a culture of ALT);
- ▶ acknowledging prior learning and competencies through official recognition;
- ▶ removing obstacles to access and retention.

In terms of basic education, the goal is to increase the number of Quebecers registered in general adult education. To this end, the government has allocated new budgets that will also be used to promote adult learning, improve reception and referral services in adult education centres, encourage the development of assessment tools designed to recognize achievements and skills and establish a loan program for part-time students. The *Government policy* is geared specifically to people under 30 who have no qualifications, persons with disabilities, immigrants, Aboriginal people, workers 45 years of age or older, young mothers and prison inmates. It focuses on a variety of ALT agents in public institutions, workplaces, community groups and in on-line learning.

The four thrusts of the *Five-Year Action Plan 2002-2007*, which accompanied the *Government policy*, are: basic education, continuing job-related ALT, recognition of achievements and skills and sharing of responsibility for the funding of ALT. In each of these cases, specific targets are set and the goal shared by all the actions is similar, namely to promote demand for ALT, to welcome, advise and support adults through the process, to provide them with services geared to their situation and to work in co-operation with and to complement the partners involved.

Consultations are currently underway to prepare an assessment summarizing the implementation of the *Action Plan 2002-2007* and to determine the priorities to be adopted in preparing the *Action Plan 2008-2013*.

2.3 The Scope of Bill 90³²

Has continuing education and training in Quebec expanded since the introduction of the *Act to foster the development of manpower training*? The data contained in all the available studies allow us to answer this question in the affirmative, although we cannot show statistically that this expansion, which has paralleled the implementation of the legislation, is definitely the result of the policy. Indeed, some indicators suggest that we must qualify this plausible effect. Thus, as we shall see later, participation in job-related ALT increased significantly in Quebec from 1997 to 2002 (see Table A1 in the Appendix). Furthermore, in its report outlining employers' compliance with the Act in 2005, the *Direction du FNFMO* (2006) observes that "the number of employers subject to the Act increased by 6.8% from 2004 to 2005, even though — and this was the biggest change — spending on education and training reported by these employers declined by 15%" (p. 4, transl.). In this regard, the five-year report 1995-2000 (DGAFMO, 2000) indicates that a number of companies (26% in 1998 and 22% in 2003) seem to prefer to pay the required amount to the FNFMO rather than to report ALT activities.

It is difficult for us to obtain reliable indicators showing that, since the enactment of Bill 90, workforce training in Quebec has increased and improved, though this is very much the goal of this legislation: the development of qualifying and transferable ALT (Bélanger, Legault, Beaupré, Voyer and Trottier, 2005). It is difficult to show this, in the view of Bérubé (2006), because there is some inconsistency in the surveys conducted in Quebec, which cannot be used to establish statistically that there has been an improvement over time in the adult learning and training situation as a result of Bill 90. Bérubé (2006) also feels that a comparison between Quebec and the rest of Canada is unreliable because the same bases are not always used for comparison.³³ "For instance, our own surveys will never let us establish scientifically that we are doing better now than before the law. Furthermore, the StatCan surveys were never built to assess our own experimentations and there is certain reluctance in using them for that purpose" (p. 7). If the percentage of participating businesses is high and has grown (see Table 2.1), if participation in ALT activities has continued to increase (see Table 2.3), and if, then, there have been statistically evidenced improvements in work-related ALT in Quebec over the last decade, it may be assumed, with supporting data, that Bill 90 has contributed, but we cannot prove or measure this.³⁴

³² This chapter relies substantially on the work of Doray, P. et Bélanger, P. (2006). *Mémoire sur le rapport quinquennal de mise en œuvre de la Loi favorisant le développement de la formation de la main-d'œuvre*, a brief submitted to the Commission de l'économie et du travail. Montréal: CIRST and CIRDEP, UQAM.

³³ For example, a 25-year-old individual is considered to be receiving initial training in Quebec and continuing training in the rest of Canada.

³⁴ The available data do not reflect the reality of participation in education and training for two reasons: (1) since a firm is required to justify its spending up to the 1% figure, some invest more without necessarily reporting it, and (2) a company whose spending on training exceeds the required 1% figure may carry the surplus forward to a subsequent year and thus spend less than 1% of its total payroll on training in that year. Neither of these cases is covered by the statistics.

Table 2.1

Number of employers subject to the Act, by payroll bracket in Quebec

	2000	2001	2002	2003
Total payroll over \$1 M	10,317	10,743	11,121	11,068
Total payroll between \$500,000 and \$1 M	9,149	9,837	10,343	10,205
Total payroll between \$250,000 and \$500,000	14,777	15,540	16,199	16,073
Total	34,243	36,120	37,663	37,346

Source: Records of the Quebec Department of Revenue (MRQ), compiled by Emploi-Québec, and taken from DFNFMO (2006)

2.3.1 Employers' 1% contribution

Readers will be familiar with the amount of catching up Quebec has had to do since 1997 and even since 1990 (Bélanger, Doray, Labonté and Levesque, 2004). The data from general surveys (Adult Education and Training Survey (AETS 2002) (Statistics Canada, 2003), International Adult Literacy and Skills Survey (IALSS 2003) (Statistics Canada and OECD, 2005), Working and Lifelong Learning (WALL, 2004)) all suggest significant progress in making up this lost ground.

Statistics based on reports filed by firms (Direction du FNFMO, 2005, p. 4) indicate that, from 1996 to 2003, more than three-quarters of the firms subject to the legislation devoted at least 1% of their total payroll to work-related ALT (Table 2.2); this figure increased to 88% in 2003 for firms whose total payroll exceeded \$1 million, 80% for firms whose total payroll was between \$500,000 and \$1 million, and 70% in the smallest ones (with total payrolls between \$250,000 and \$500,000).

An important point to note is the increase in the percentage of firms investing 1% or more. This is particularly true of firms whose total payroll is between \$500,000 and \$1 million (there was an increase in the proportion of firms that invested from 70% to 80% between 1997 and 2003), whereas this growth is less substantial in the other two groups.

The most significant data can be derived from a comparison of the surveys conducted in 1997 and 2002 by Statistics Canada of adult education and training (Statistics Canada, 2003). Even the overall comparison between these two surveys conducted by Statistics Canada and noted in the Five-Year Report (p. 34) shows that participation rates in "formal, job-related training increased in all provinces between 1997 and 2002. The largest growth was experienced in Quebec, where the participation rate increased 57%, from 20% to 32%" (Peters, 2004, p. 11). Participation rates in employer-sponsored training increased from 15% to 24% (Peters, 2004, p. 16) for the greatest increase among the provinces.

Table 2.2

Spending on ALT and as a percentage of total payroll by Quebec firms between 1996 and 2003, by Firm Size

	1996	1997	1998	1999	2000	2001	2002	2003
Large firms*								
Spending on ALT (\$M)	1,179.0	837.6	968.8	1,033.6	1,032.9	985.4	1,036.0	991.7
% of total payroll	2.26	1.52	1.60	1.62	1.64	1.55	1.52	1.51
% of employers spending at least 1%	85	84	86	87	88	87	88	88
Medium-sized firms**								
Spending on ALT (\$M)		56.6	67.0	75.8	77.1	84.5	88.8	88.7
% of total payroll		1.07	1.19	1.25	1.21	1.23	1.23	1.24
% of employers spending at least 1%		70	75	77	78	78	79	80
Small firms***								
Spending on ALT (\$M)			49.1	56.4	55.8	60.7	62.1	64.9
% of total payroll			1.07	1.13	1.07	1.11	1.09	1.15
% of employers spending at least 1%			65	67	68	68	69	70
Total								
Spending on ALT (\$M)	1,179.0	894.2	1,084.9	1,165.8	1,165.8	1,130.6	1,187.0	1,145.3
% of total payroll	2.26	1.48	1.53	1.56	1.56	1.49	1.47	1.46
% of employers spending at least 1%	85	78	74	76	77	76	77	78

Source: Records of the Quebec Department of Revenue (MRQ), compiled by Emploi-Québec, Fonds national de formation sur la main-d'œuvre, Rapports d'activités de 1997 à 2005, taken from Doray and Bélanger (2006).

* Total payroll over \$1 million

** Total payroll between \$500,000 and \$1 million

*** Total payroll between \$250,000 and \$500,000

A more rigorous analysis of the two surveys, considering only the strictly comparable groups and types of ALT in the 1997 and 2002 surveys,³⁵ gives us a picture that is similar to the data we noted earlier but even more revealing (see Tables 2.3 and 2.4). Participation rates for the employed population in employer-supported training

³⁵ The two surveys in 1997 and 2002 are based on different models. In 1997, the survey focused on all adult education and training activities whereas the 2002 survey emphasized job-related adult learning and training activities. However, it is possible to reduce the coverage of the 1997 survey to make it comparable with the 2002 survey, as the authors realized. The tables shown here indicate the situation on the basis of the employed population, which is the relevant reference population for any examination of changes in in-company ALT.

climbed from 16% to 25%, whereas in Canada, it rose from 23% to 26%. The increase in participation was three times greater in Quebec than in Canada as a whole, even to the point where the significant gap in 1997 (23% versus 16%) narrowed so much in 2002 that it ceased to be significant.

Table 2.3

Participation rates in employer-sponsored, work-related ALT in Canada and Quebec, 1997 & 2002 (employed population 25 years of age and older)

	1997	2002
Atlantic	25	29
Quebec	16^a	25^a
Ontario	26	25
Prairies	26	28
British Columbia	25	27
Total	23 ^a	26 ^a
	N= 17, 512	N= 15, 544

Source: Statistics Canada (2003), taken from Doray and Bélanger (2006).

^a difference between 1997 and 2002 significant to 0.01

This growth can be observed in Table 2.4 as well as in many studies (including DFNFMO, 2005; DGAFMO, 2000) for all organizations regardless of their size. In fact, participation has doubled in very small firms, from 7% to 14%. It has increased by 4 percentage points in small firms, by 7 points in medium-sized ones and by 15 points in large ones. However, while the data indicate that Quebec has practically made up the gap that existed between it and the rest of Canada in firms with a 100 or more employees, participation rates in employer-sponsored ALT in small and

medium-sized companies (with fewer than 100 employees) remain significantly lower in Quebec. It is clear that in the case of small firms, Quebec still lags far behind. "The higher the total payroll group, the greater the proportion of employers who report investing at least 1% of their payroll in education and training"; however, as Table 2.2 indicates, "while the investment in ALT reported by large companies seems to have plateaued in 2000, that of small and medium-sized companies has grown since then" (DFNFMO, 2005, p. 22; transl.).

It is difficult therefore not to ascribe the quantitative changes noted, at least in part, to the implementation of the Quebec public policy on job related ALT. We shall now look at the likely effects on the development of an ALT culture and, even more important, at the institutionalization of that culture in human resource management practices.

Table 2.4

Participation rates in employer-sponsored job-related ALT,
by organization size, in Canada and Quebec in 1997 and 2002
(employed population 25 years of age and older)

	1997		2002	
	Canada	Quebec	Canada	Quebec
Fewer than 20 employees	12 ^a	7 ^a	18 ^a	14 ^a
Between 20 and 99	20 ^a	16 ^a	25 ^a	20 ^a
100 to 499	30 ^a	23 ^a	31	30
500 or more	33 ^a	22 ^a	36	37
Total	23 ^a	16 ^a	26	25
	n=17,109	n = 4,076	n = 13,047	n = 3,188

Source: Statistics Canada (2003), taken from Doray and Bélanger (2006).

^a Canada-Quebec difference significant to 0.01

2.3.2 Structuring effects of Bill 90

The various surveys conducted of the qualitative effects of implementing the Act to *foster the development of manpower training*, which are echoed in the Five-Year Report, show that the impact has been significant at several levels. Thus, Béji, Fournier and Filteau (2004) note in the conclusion to their study “the positive impact that the provision of education and training under Bill 90 has had in improving the qualifications of employees and adapting them to the tasks they perform” (p. 193; transl.). Another study by Lesemann (2005) shows that Bill 90 has had “an effect on the deliberate and planned nature of this education and training” (p. 8; transl.). Although ALT was already very prominent in the firms examined, this author also notes an impact on future ALT projects.

Charest (2007b) contends that Bill 90 has had a structuring effect on the partnership itself, on the resulting organization (Figure 1.10) and on certain trade union practices: he notes that Bill 90 has had the effect of persuading unions to place greater emphasis on negotiating clauses concerning ALT in collective agreements.

Two other significant facts emerge from the analysis by Bélanger *et al.* (2004). The impact of Bill 90 tends to vary with firm size and area of activity, and is felt in the systematization of ALT activities in firms as much as in the increase in the amount of ALT activities. Bernier, Frappier and Moisan (2003) also indicate a structuring effect, more particularly in small and medium-sized companies. Béji *et al.* (2004), like Bélanger, Doray, *et al.* (2004), add that certain parameters, including the age of the employee, his or her status, seniority and income as well as the size of the company, may increase or reduce the chances of participating in ALT activities.

► Structuring effects at the sectoral level

Over the past 10 years, the creation and proliferation of sectoral committees (some committees were originally established as the Quebec chapters of Canada-wide sector councils), which now number 30,³⁶ are also an upshot of the Act and its regulations, especially the measures and co-operation that these institutional frameworks have permitted and facilitated (Charest, 2002; 2006; DFNFMO, 2005, chap. 6): dissemination of information, mobilization, negotiation, support for initiatives involving more than one company, representation, action-research, research support, etc. In the decentralized context of Canadian industrial relations at the level of individual companies, the emergence of these forms of sectoral consultation and mediation is a very significant qualitative development (Charest, 2006).

This concerted and deliberate sectoral structuring is a major factor in the achievements that can be ascribed to the Act. Several sectoral committees have played an important role in the expression and operational definition of learning demand in the relevant sector. The joint development of skill profiles and professional standards profiles covering similar jobs in a single sector has helped, and will continue to help not only to improve initial professional education to make it more relevant (Tremblay, et Doray, 2000) and to improve the supply of continuing education, but also to help put in place measures and services associated with the Recognition of Prior Learning, an important field of endeavour linked to the *Workforce skills development and recognition framework*, but with a much broader scope.³⁷

Nor can we ignore the initiatives taken by certain sectoral committees to create or attempt to create, despite the difficulties that still exist,³⁸ *mutuelles de formation* in such a way as to meet the demand coming from the smallest firms.

The sector-by-sector analysis by Bélanger *et al.* (2004) makes it possible to qualify some of the results. In businesses in the retail sector, for example, the Act has made it possible to inventory all of the moneys invested and to better structure both external and in-house ALT activities. A similar structuring effect could also be observed in the food-processing sector. In the biopharmaceutical industry, the impact of the Act to *foster the development of manpower training* has been markedly different. In that sector, investment by companies in the education and training of their staff was already quite substantial and exceeded by far the minimum 1% threshold. The Act has mainly an incentive effect here, encouraging more systematic monitoring of these ALT activities. Use is also made of the training fund when special financial support is required to implement a pilot project, embark on some innovation, systematize training evaluation, develop ALT in particularly reluctant sub-sectors or review the training of the trainers. In these companies, the person responsible does not hesitate to emphasize the tedious and bureaucratic nature of the necessary steps and initiatives, even where the overall evaluation remains positive.

³⁶ Including the mining industry's sectoral labour force committee.

³⁷ See, for example, the opinion of the Conseil supérieur de l'éducation (2000) on this subject.

³⁸ See the Five-Year Report, pp. 72-73.

► *Structuring effects at the firm level*

The impact of the Act has also, though not primarily, been qualitative in nature; this new legislative context, its regulation and its institutions, tend to speed up the process of differentiating the education and training function in companies. Bélanger *et al.* (2004) observe that, in most of the establishments they studied, the obligations created by the Act have a structuring effect at the company level in that the education and training function becomes more systematized in the organization. The fact that so many firms have created a position of full- or part-time ALT staff position since the Act came into force is the result of more than mere chance. Of course, more fundamental factors linked to the organization of work have generated the new demand for ALT, and this is a key reason why companies have created these positions. However, it cannot be denied that this endogenous phenomenon and the external pressure produced by the enactment of the legislation have had a strengthening effect on the duty to report on ALT activities. The Act also provides an opportunity for some firms to inventory all the moneys invested in ALT through their different services (HRM, production units, quality control, occupational health and safety), to provide better accounting for all activities (tutoring, training of trainers, technical training, support for self-learning, etc.) and to better structure the ALT.

This effect of increased institutionalization, this heightened recognition for ALT in human resources management and on the production line or in quality control, like the recognition and lateral accounting of these often isolated activities that take place often in mutual ignorance, are all highly noticeable results.

Thanks to the availability of a minimum level of funding guaranteed under the Act for future years, an organization can more easily develop an ALT development plan extending over several years. Such a stable source of funding tends to make it easier to plan, beyond a one year basis, the ALT activities in the establishment in question. The more systematic monitoring of training activities that the Act requires also allows for better internal recognition of the importance of the investment that the company is making in the professional development of its staff. One should be prudent, however, before extrapolating the results of these limited observations to all companies in Quebec. Finally, while those responsible for ALT in companies stress the bureaucratic nature of the steps and initiatives required, their assessment tends to remain positive overall.

► *Direct impact of investment in innovation, research and development*

Recourse to the National Labour Force Training Fund (FNFMO) is necessary to obtain special financial support in order to implement a pilot project, develop an innovation, systematize evaluation, develop education and training in particularly reluctant sub-sectors or review the training of trainers themselves. It bears repeating that this fund was created by the legislation and with the contributions of businesses that fail to report spending 1% of payroll on ALT. The direct investments by the FNFMO in innovation, promotion, research and supporting actions in specific sectors, are significant, with

more than \$130 million having been allocated over the last five years (DFNFMO, 2005, p. 94). How the investment is made is just as important as the amounts allocated. Projects, such as in the area of research for example, are selected through open consultative mechanisms consisting of a dual selection process: relevance is determined by the socio-economic actors, and scientific quality by a scientific evaluation committee.

Beyond the quantitative effects of Bill 90 that we have discussed, the development of an organizational ALT culture is an important effect, especially since it relates to the very spirit of Bill 90.

3 UNDER-REPRESENTED GROUPS AND SECTORS IN WORK-RELATED LEARNING AND TRAINING

That a great deal of effort has gone into organizing and institutionalizing ALT activities over the last ten years is beyond dispute. However, while the available statistics and qualitative studies indicate substantial progress, they also highlight a number of problems that will confront the parties involved as they continue their work in this undertaking, which is, after all, only ten years old.

The development of work-related ALT suffers from four major disparities: the underdevelopment of ALT in small businesses, among less qualified employees, among older workers and in certain sectors of industry. Another question arises from the fact that the inclusion in the workplace of immigrants and their involvement in ALT above and beyond French-as-second-language courses are unfortunately still very poorly documented. The differences in participation rates between people born in Canada and those born elsewhere are well known.³⁹ This requires further study, as does the better known but still inadequately addressed problem of recognizing qualifications obtained in home countries.

3.1 ALT in small firms

In Quebec and in the rest of Canada, the situation regarding structured ALT in small businesses shows, and this fact is now well supported statistically, that there is low participation in ALT for the staff working in those enterprises (Bélanger, Doray *et al.*, 2004). Certainly, as Bernier *et al.* (2003) have shown, ALT in very small firms is likely based on a different conception of training than that applied in large enterprises. There is a tendency to prefer “endogenous experience and transmission of knowledge based on learning that takes place in the work environment” (p. 2, transl.). A small business, for example, would tend to make use of informal coaching and to use the tools provided by the professional networks as well as to benefit from the education and training given by suppliers.⁴⁰ The idea of *mutuelles de formation* (section 2), which allow some small businesses to create a shared ALT body, is also progressing, slowly but surely.

Variability in participation in job-related training by company size is a well-known phenomenon in all advanced industrial countries (Bélanger and Valdivielso, 1997; Turcotte, Léonard and Montmarquette, 2003; Bélanger, Doray *et al.*, 2004). This trend may also be observed in Tables 2.1, 2.2, 2.4 and 4.4. The participation rate in job-related ALT in Quebec in 2002 ranged from 14% in the smallest firms to 20% in firms with between 20 and 99 employees and 37% in firms with more than 100 employees, a range of more than 23 percentage points between the large and the very small companies

³⁹ In Quebec, the rate of employer-sponsored participation by the employed population 25 years of age and older ranged from 26% to 13%, depending on whether people were born in Canada or elsewhere (Statistics Canada, 2003).

⁴⁰ Note, however, that some surveys show that informal education and training increase with company size (see section 4.3).

(Table 2.4). The DGARES survey referred to in the Five-Year Report 2000-2005 (p. 27) reached the same conclusion. In the Five-Year Report for 1995-2000, it was noted that though the overall contribution of employers with higher payroll is smaller, they tended before 2001 to benefit more from the fund and its granting program (Table 3.1).

Table 3.1

Participation rates of employers in the FNFMO, and grants awarded
By organization size, Quebec

	Amounts paid to the FNFMO in 1998	Amount of grants awarded in 1999-2000
Total payroll between \$250,000 and \$1 M	58%	11%
Total payroll over \$1 M	42%	89%
Total	100%	100%

Source: DGAFMO (2000)

More important still is the fact that, despite a rise between 1997 and 2002, the participation rate in employer-sponsored ALT in small firms remained significantly lower in Quebec in 2002 than in the rest of Canada (a difference of 4 to 5 percentage points), contrary to what we found in the case of firms with more than 100 employees.

Our data also show (Table 4.4) that while the difference between small and large firms declines very significantly in the case of informal learning, it cannot be said that such education and training tends to be better developed in small firms, where it would function as a substitute. Informal learning exists in all workplaces and even people employed by large firms are somewhat more likely to report the existence of such forms of learning. Certainly, informal learning is an invisible but no less important part of learning efforts (Livingstone, 1999), but it does not replace structured learning; rather, it complements it, not to mention the fact that it is also given unequally according to individuals' qualifications.⁴¹

These data concerning low rates of participation in ALT in small firms should be viewed in light of the decision made by the Government of Quebec in 2004 to exempt companies whose total payrolls were under one million dollars from the requirements of the legislation. In 2003, of the 37,346 companies subject to the Act, 26,278 had total payrolls below \$1 million, which left some 11,000 companies still subject to the Act in 2004 (see Table 2.1). There is a large gap to be filled here in order to allow these smaller firms and their employees to meet the same requirements for continuing skills development.

Voyer (2007) points out that the Act neglects a significant segment of atypical

⁴¹ The rate of participation in informal training has grown gradually from 38.5% to 76.4%, by level of initial training (Statistics Canada, 2003).

professionals (people in part-time work, temporary jobs or self-employment) who also need ALT. The *mutuelles de formation* could be an emerging device for such atypical workers. The last Five-Year Report specifically mentioned problems in putting such initiatives in place in the absence of more appropriate regulations. In a press release distributed following the enactment of Bill 5, Michel Bérubé stated that the updating of Bill 90 would make it possible to: “establish [*mutuelles*] in order to bring together companies that need to structure their education and training. These [*mutuelles*] will be useful for small companies that often experience problems with respect to training and human resources management” (transl.).⁴²

3.2 Underdevelopment of work-related ALT in certain sectors of industry

A second area where disparities may be observed is among different sectors of industry. The Five-Year Report confirms what our research has already found (Bélanger, Doray et al., 2004): ALT is still clearly underdeveloped in the personal services sector and the retail sector, as in the primary and manufacturing sectors (Table 3.2). Quebec is no different from the remainder of Canada in this regard, except in the case of the primary sector, where Quebec lags twice as far behind. Thus, the crisis in manufacturing industries, inseparable from the context of globalization and the migration of production, forces these businesses to focus on specialized niche markets that, in return, generate substantial demand for continuing education and training of all staff.

Table 3.2

Participation rates in employer-sponsored work-related ALT, by sector of activity, in Canada and Quebec in 2002 (employed population 25 years of age and older)

	Canada	Quebec
Primary sector	17 ^a	8 ^a
Manufacturing	20	19
Construction, public services and transport	19 ^a	22 ^a
Commerce	19	20
Finance, insurance, professional and technical services	27	28
Education, health, information and culture	37 ^a	32 ^a
Personal and corporate services	15	15
Public administration	52 ^a	49 ^a
Total	26	25
	n = 15,543	n = 3,664

Source; Statistics Canada (2003), taken from Doray and Bélanger (2006).

^a Canada-Quebec significant difference to 0,01

⁴² www.gouv.qc.ca/portail/quebec/pgs/?lang=fr

In the years to come, the authorities responsible for implementing the legislation will not be able to ignore this challenge in their promotional activities and in the support and encouragement they provide for innovation and research into ALT.

3.3 Demand for ALT among less qualified groups in the labour force

We are familiar with the relationship between the level of professional qualification and the level of initial education, on the one hand, and participation in the labour market. The relative share of employment by skill level (Emploi-Québec, 2004) clearly shows that the labour force aged 25 and over with only an “elementary” skill level is small (16%) (Table 3.3). In comparison, 37% of the unemployed have less than secondary education.

Table 3.3

Breakdown of respondents by level of education and employment status in Quebec in 2002 (population 25 years of age and older)

	Completion of some high school or less	High school graduation	Some college (completed or not)	University	Total
Employed persons	16	16	46	22	100
Unemployed persons	37	16	36	11	100
Persons not in labour force	49	16	26	9	100
Total	28	16	39	17	100
n= 6,102					

Source: Statistics Canada (2003), taken from Doray and Bélanger (2006).

If we consider only employer-sponsored work-related ALT in the employed population 25 years of age and older, the likelihood that they will participate in ALT ranges from one to seven, depending on the level of formal education received (Table 3.4). In fact, the participation rate is 6% for employed persons who have not completed high school and 40% for those who have received some university education. This situation is not unique to Quebec but is found throughout Canada. The data quoted in the Five-Year Report of the

Table 3.4

Participation rates in employer-sponsored work-related ALT, by level of education, in Canada & Quebec in 2002 (employed population 25 years of age and older)

	Canada	Quebec
Some high school or less	7	6
High school graduation	17	15
College education	29	28
University	38	40
Total	26	25
	n=15,543	n=3,665

Source: Statistics Canada (2003), taken from Doray and Bélanger (2006).

CPMT confirm this trend toward substantial variability in participation on the basis of initial education received or professional categories.

Each year, for example, some 15,000 young people who leave CEGEP with a college technical diploma will embark on a professional career that we know will be marked by increasing alternation between work and continuing professional development in their chosen profession. Whether we are considering nurses (Murphy, Cross and McGuire, 2006), medical laboratory technicians, early-childhood educators, administrative, accounting or financial technicians, civil, mechanical or industrial engineering technicians or even lawyers, engineers or pharmacists, many of whom are now employed by companies, they will all see their career paths change profoundly (Conseil interprofessionnel du Québec, 2000; Garavan, Hogan and Cahir-O'Donnell, 2003; Roscoe, 2002). It has become necessary for people to update, develop and expand knowledge and skills throughout their careers if they wish to continue to practise their profession (Cheetham and Chivers, 1996). A new career model is coming into being and the number of hours spent on continuing professional development throughout a person's career will become just as important as the number of hours spent in initial training (Cervero, 2001). While the professional governing bodies are formally responsible for continuing education (*Professional Code*, section 86 paragraph J⁴³), the employers of these professionals tend to pay the cost of such activities and to add other ALT that better reflects their specific needs.

Table 3.5

Participation rates in employer-sponsored work-related ALT, by socio-professional category, in Canada and Quebec in 2002
(employed population 25 years of age and older)

	Canada	Quebec
Managers	31	31
Education professionals	46 ^a	34 ^a
Social sciences professionals	35	34
Natural sciences, engineering & health professionals	40	41
Specialized white-collar workers	25	23
Non-specialized white-collar workers	20	21
Specialized blue-collar workers	22	23
Non-specialized blue-collar workers	13	11
Total	26	25
	n=15,546	n=3,662

Source: Statistics Canada (2003), taken from Doray and Bélanger (2006).

^a Canada-Quebec difference significant to 0.01

⁴³ Source: www.opq.gouv.qc.ca

Data by socio-professional category show the same tendencies as the data based on level of initial education: the less qualified categories participate less, the participation rate varying in practice from one to two, depending on the level of professional qualifications (Table 3.5). Thus, non-specialized blue-collar workers in Quebec have a participation rate of 11%, whereas 41% of natural sciences professionals are likely to make use of the company's educational resources or support, a rate that is close to four times higher.

This situation is not new in either Quebec or the rest of Canada. As can be seen in Table 3.6, the increase in participation between 1997 and 2002 in both Quebec and the rest of Canada was lowest among blue-collar workers. Moreover, it is primarily because of the substantial increase in the participation rate of more qualified workers that Quebec was able to catch up with the rest of Canada.

Table 3.6

Participation rates in employer-sponsored work-related ALT,
by professional status, in Canada and Quebec in 1997 and 2002
(employed population 25 years of age and older)

	1997		2002	
	Canada	Quebec	Canada	Quebec
Managers & Professionals	34 ^a	22 ^a	37	35
White-collar workers	18 ^a	14 ^a	22	22
Blue-collar workers	15 ^a	10 ^a	16	15
Total	23 ^a	16 ^a	26	25
	n=17,512	n=4,151	n=15,544	n=3,664

Source: Statistics Canada (2003), taken from Doray and Bélanger (2006).

^a Canada-Quebec difference significant to 0.01

Firms seeking to increase productivity and workers wanting to improve their qualifications in order to keep their jobs and improve their conditions have a shared interest in ensuring that skills are enhanced in an ongoing manner at all levels of professional classification or initial education. This trend is international in scope. One finds a similar consensus and a shared desire to raise the level of general and technical qualifications in the workforce in the European Union and its member countries (European Commission, 2000). Thus, in France, in the latest reform of the law and policy on company training, a minimum number of training hours was guaranteed for all employees in order to correct the tendency of the most qualified categories of workers to appropriate ALT resources.

Here, as in the small enterprises, a change is required in public regulation and the practice of supporting innovation at all levels.

3.4 Demographic changes and ALT among older workers

Participation in job-related ALT in Quebec and elsewhere tends to be closely linked to the age of the employees. A substantial decline can be observed in the participation rate among individuals over 55 years of age compared with other age groups (Table 3.7). This problem, which is recognized in the Five-Year Report and highlighted by the CPMT as a research priority, could soon become a priority among economic actors. Indeed, the greying of the labour force and the tendency to postpone the statutory retirement age, as well as the lack of manpower in some regions and sectors, will also require employees over 55 years of age to engage in continuing development of their skills. It is something of a paradox that it is those groups of staff whose initial education dates back furthest who benefit least from ALT activities.

For a decade now, educational gerontology⁴⁴ has deconstructed the arbitrary bases of the Malthusian view of these populations. Today, the learning capacities of these populations are recognized. OECD and CERI (2006) have reminded us of the significance that recent discoveries concerning the brain have for life-long education.

Table 3.7

Participation rates in employer-sponsored work-related ALT,
by age of participants, in Canada and Quebec in 1997 and 2002
(employed population 25 years of age and older)

	1997		2002	
	Canada	Quebec	Canada	Quebec
25-34 years old	24 ^a	16 ^a	30	32
35-44 years old	25 ^a	18 ^a	27	25
45-54 years old	25 ^a	16 ^a	26	24
55-64 years old	14 ^a	9 ^a	17	16
65 years and over	–	–	9	–
Total	23 ^a	16 ^a	26	25
	n=17,512	n=4,151	n=15,544	n=3,664

Source: Statistics Canada (2003), taken from Doray and Bélanger (2006).

^a Canada-Quebec difference significant to 0.01

This challenge is both economic and social in nature. Companies need this expertise, and its continuing development, both to ensure cross-generational transfer of technical and professional knowledge in production units and to continue to benefit from this experienced workforce (ILO, 2001), which cannot be sure of remaining employed without access to education and training in the company. With an eye to the future of

⁴⁴ See Bélanger (1992) and *Educational Gerontology: An International Journal*, published by Taylor and Francis since 1976.

both the Quebec labour market and the quality of life of one-quarter of the population, there is a pressing need to refocus priorities in this direction and sensitize all of the economic actors to these realities.

3.5 Obstacles to participation in ALT

What, then, are the factors that impede participation in ALT? The available data consist of the responses to two surveys based on a list of possible obstacles. Although it is not possible to draw conclusions about the real obstacles, these data (Tables 3.8 and 3.9) nevertheless give us an idea of the factors that might influence participation in ALT activities. The data from these two surveys are very similar and in both Quebec and the rest of Canada, the first four categories stand out.

Table 3.8

Reasons given as obstacles to ALT participation,
in Canada and Quebec in 2002 – WALL Survey
(population 25 years of age and older)

	Canada	Quebec
Not enough time	61	62
The timing was not convenient	56	48
Family responsibilities	39	33
The training was too expensive	50	32
No need for structured training	11	15
The program was not given	12	15
No support from the employer	21	13
Child-care problems	10	9
Health reasons	8	7
Did not qualify or have the prerequisites	7	6

Source: WALL (2004)
N = 9,026

Three main obstacles, taken from the first four categories, emerge as factors behind the failure to participate: problems of availability (scheduling conflicts, lack of time), the problem in reconciling ALT and family responsibilities and also the high cost of ALT. The only category that seems to distinguish Quebecers from other Canadians is the high cost of ALT, which, while a major factor in Quebec, has a greater impact on people in Canada as a whole. It should be noted, as can be observed in Table 4.3 for informal learning, that the proportion of structured employer-sponsored job-related ALT is slightly greater in Quebec, but significantly greater from a statistical standpoint.

The survey conducted by Lapierre (2005), consisting of interviews with the employees of companies subject to Bill 90, reported the reasons given by employees who had not participated in any funded ALT, despite offers from their employers.⁴⁵

Table 3.9

Reasons given as obstacles to ALT participation,
in Canada and Quebec in 2002 – AETS Survey
(population 25 years of age and older)

	Canada	Quebec
The training was too expensive	43	29
Too busy at work	32	29
Conflict with work schedule	27	25
Family responsibilities	26	21
The training was not appropriate	16	11
Other reasons	10	11
It was not worthwhile	7	10
Could not find training	7	7
Health reasons	6	7
Lack of support from the employer	9	6
Did not have the necessary prerequisites	5	5

Source: Statistics Canada (2003)
N = 25,056

Table 3.10

Reasons given as obstacles to employer-sponsored work-
related ALT in Quebec in 2002 – Bill 90 evaluation survey
(population employed by companies subject to Bill 90)

	Quebec
Personal reasons (health, family, ...)	29
No need or lack of interest	25
Training cancelled or postponed	19
Not useful for my work	11
No time (too much work)	9
Other reasons	7

Source: Lapierre et al. (2005).
N = 1,899

⁴⁵ 40% of the employees interviewed had not participated in any activity and approximately 12% of them had been offered employer-sponsored ALT.

4. THE “ENGINEERING” OF ALT IN QUEBEC FIRMS

The rooting of ALT in the strategy and productive activities of a company and in the lives of those participating in it is a complex reality that has an impact far beyond immediate ALT practices. In Quebec, while needs diagnosis and activities planning are beginning to form part of companies’ ALT management and practices, they are far from being integrated into an overall “engineering” of training.

ALT engineering includes not only the organization of education and training but also prior and subsequent activities — “upstream” and “downstream” activities — which form part of its relevance and quality. In addition, there is support for informal learning, an activity that is less visible but just as significant (Livingstone, 2000).

In Chapter 5, we will examine the practices and strategies for expressing the “learning demand,” the “upstream” planning of ALT programs and “downstream” activities related to evaluation, monitoring and transfer. In this chapter, we will consider the organization of ALT and the forms it may take in companies, as well as discussing the unequal way in which informal learning is accounted for.

At the present time, a number of factors encourage firms to further prioritize ALT. Be it the competitiveness of the market, the precarious nature of employment in some areas, the speed of technological change or, more profoundly, the value of continuing professional development and life-long learning, ALT in firms is a phenomenon that cries out for further study.

Given the limited statistical studies and data available, it is difficult to draw a picture of recent work-related ALT practices in Quebec. An initial picture of workplace ALT in Quebec companies was drawn by Doray (1991). It was “less a statistical picture of the situation than a more qualitative analysis of the uses made by industrial firms of investments in training” (Doray, 1991, p. 329; transl.). It is still the only general picture that we have of ALT in Quebec. The author “shows the existence of a certain diversity in the relationship between ALT and work in the large manufacturing companies in Quebec” (Doray, 1991, p. 351; transl.). This benchmark description came four years before Bill 90 became law and 11 years before the Quebec *Government policy on adult education and continuing education and training* was issued.

We must complete our picture on the basis of certain recent studies, including the work done by Dunberry (2006) and Lesemann (2005), the article by Bélanger, Doray and Levesque (2007) and especially the study entitled *Les pratiques et l’organisation de la formation en entreprise au Québec* [Practice and organization of company training in Quebec] conducted by CIRDEP (Bélanger, Larivière and Voyer, 2004).⁴⁶ The latter study

⁴⁶ The research of Bélanger *et al.* (2004) considered the structuring of ALT roles and practices in 15 companies in Quebec in three major sectors of economic activity: the retail sector, food processing and biopharmaceuticals. The data were collected in two successive series of interviews and a documentary study. The empirical reconstruction of the different ALT contexts and support for informal learning was based on data collected through interviews and documentary analysis.

drew a detailed picture of structured ALT and support for informal learning and self-administered training in fifteen companies. Other studies have explained the magnitude of the phenomenon in Quebec and the rest of Canada (Statistics Canada, 2003; Wall, 2004). Using these sources, therefore, we will attempt to paint a portrait of what is happening in terms of structured ALT and support for informal learning in workplaces in Quebec.

4.1 ALT structure in the firm

The creation of a management function responsible for ALT within the firm is a recent phenomenon in Quebec. Over the last five years and for longer in large companies, this function has increasingly appeared in companies' organizational charts.

One of the surprises in the study by Bélanger *et al.* (2004) was how very recent this creation of a specific ALT function in companies really is. As was noted in part 2.3.2, this phenomenon cannot be separated from the enactment in Quebec during the same period of the *Act to foster the development of manpower training* (Bill 90) and the duty it imposes to report ALT activities accounting for 1% of the total payroll. In fact, there are very few large or medium-sized companies in that study that have not yet created a position dedicated in whole or in part to developing and managing ALT in their organization.

In some companies, the individual who assumes this position was already working in the organization. In others, someone was chosen from the outside, a person who was specialized in human resources management and/or adult learning and training. Of course, prior to or without the integration of such a position into a company's organization chart, education and training were provided — and continue to be provided. If function creates organization, in this case it also precedes it. Before the position was created, the analysis of needs, expression of demand and organization of ALT activities tended to occur spontaneously and were not part of a process of systematic analysis.

Based on what has been observed, the creation of a management function dedicated to ALT tends to make the organization's responsibility in this area more visible and more legitimate. In more concrete terms, it enables companies to better design and coordinate the increasingly numerous ALT activities or activities supporting informal learning and team-based learning. This also makes it possible to systematize needs diagnoses, the planning of activities, and accountability and monitoring of training. Typically, the first two activities are carried out by a newly-appointed ALT manager (see survey by Bélanger *et al.* (2004)), especially if the person comes from outside the organization, are to conduct a needs assessment and prepare an annual ALT plan. For example, in a retail operation, the ALT manager plans staff education and training with in-house and outside resources, participates in the management committee, recruits outside trainers and negotiates the budget share allocated to ALT — the latter an important task.

ALT decision-making also highlights the important role played by front-line supervisory staff: managers, assistant managers, forepersons, and heads of production units. They are the ones ALT managers have to negotiate with to free up certain times and plan education and training activities, which make it necessary to remove participating employees, both those providing and receiving the training, from their production duties for a given period of time. In short, the more that training needs are dictated by production imperatives, the more that the training section must deal with production heads, whether the focus is on quality control, health and safety or changes in equipment.

As will be seen in the discussion of the “upstream” and “downstream” dimensions of ALT (chapter 5), it appears that workplaces subject to high quality control or occupational health and safety standards present a special profile, reflected in the internal organization of ALT for production staff. Thus, the companies in the case study that were subject to such pressures tended to opt for a form of organization that emphasized control and greater involvement of non HR-units, such as the quality control department.

The three sectors studied by Bélanger *et al.* (2004) illustrate this division of responsibilities for dealing with continuing education and training. In retail businesses, the ALT manager is often a member of the human resources department and is responsible for all ALT activities involving production employees, including upstream and downstream activities. The situation is different in sectors such as food processing and biopharmaceuticals,⁴⁷ where companies are required to observe high quality control standards. In this context, the ALT manager tends above all to be responsible for monitoring activities, administering trainee records and some ALT activities of a more general nature. On the other hand, activities relating to quality control, which accounts for the largest amount of training, are usually planned and organized under the direction of the quality control office or assigned directly to a different structure reporting to that office.

Among the 15 businesses studied, there is a general trend toward a division of responsibilities linked to the organization of ALT for managers, professionals and scientists, on the one hand, and for production unit operators, on the other. ALT for managers tends to be administered in a way that is fairly similar to that for professionals, where the activities are authorized by general management but co-ordinated by the ALT or human resources department. Responsibility for ALT for operators tends to be shared by production and quality control units.

The study by Bélanger *et al.* (2004) shows that, generally, the unit or department responsible for ALT co-ordinates planning and, where appropriate, evaluation. It manages contracts and day-to-day activities such as monitoring expenses and reimbursing people. It is also the ALT service that normally assumes responsibility for developing and applying the company’s ALT policy and the ALT regulations that come

⁴⁷ For a detailed picture of continuing education and training in the biopharmaceutical sector, see Bélanger and Daniau (forthcoming).

under the *Ministère de la santé* [Ministry of Health] or the *Act to foster the development of manpower training*, the so-called “1% Law.”

4.2 Structured work-related ALT

Throughout this chapter, we will use the expressions “structured ALT” and “informal learning.” We will not get into the distinctions between “formal,” “non-formal” and “informal” learning beyond noting simply that structured ALT includes the first two of these (formal and non-formal) in the sense that it is organized and recognized without necessarily leading to the award of any certification.⁴⁸

Beyond the predominant practices of various forms of “presential” ALT, one emerging trend is an interest in new information technology (NIT). Already, a number of small and medium-sized firms in Quebec show an interest in using new technologies to improve their performance (CEFRIQ, 2006). The CEFRIQ NetPME 2006 survey of more than 1,800 small and medium-sized firms in Quebec indicated that:

Three out of ten small and medium-sized businesses (29%) feel that on-line education and training (e-learning) is a fairly or very interesting resource for training human resources. Overall, 17% made use of it in the last 24 months and 16% intend to use it during the next six months (CEFRIQ, 2006, p. 2, transl.).

However, Marchand, Lauzon and Pérès (2007) conducted a case study of five companies, observing and analysing mentor-pairing practices and the introduction of computer technologies as training methods. They concluded that “the technology is present in companies but is often poorly used.” (CPMT, 2007, p. 1; transl.).

4.2.1 Participation in structured ALT

As already noted, the overall rate of ALT participation of the population in 2002 did not vary significantly between Quebec and Canada as a whole (Table 4.1), although the situation was different in 1997.⁴⁹ However, when structured ALT is considered, we find that people in Quebec participate somewhat less in structured work-related ALT than people in the rest of Canada. The fact remains that more than one adult Quebecer out of five participates in this kind of learning. On the other hand, Quebecers participate more in structured learning activities for personal interest than the Canadian average. The significant difference is three percentage points in both cases.

⁴⁸ We have borrowed the definition used by Bourdon (2006): “Participation in structured forms of learning includes participation in courses, programs or other structured activities such as workshops. Thus, structured education and training as a whole correspond to a combination of formal and non-formal activities as defined by UNESCO” (p. 146; transl.).

⁴⁹ There was a difference of about 7 percentage points between Quebec and Canada in 1997 in the overall rate of participation in ALT (Labonté, Doray, Bélanger and Motte, 2004).

Table 4.1

Participation rates in ALT, by type and approach, in Canada and Quebec in 2002
(total population 25 years of age and older)

	Structured work-related ALT	Structured ALT for personal interest	Informal work-related learning	Work- related ALT (structured and informal)	Overall rate of ALT
Atlantic	24	7 ^a	43	48	50 ^a
Quebec	22^a	13^a	45^a	50^a	55^a
Ontario	25 ^a	8 ^a	50 ^a	54 ^a	56
Prairies	28 ^a	9 ^a	49	54 ^a	57
British Columbia	28 ^a	12	49	54	57
Total	25 ^a	10 ^a	48	53	56
	N=25,056	N=25,042	N=24,636	N=24,705	N=24,721

Source: Statistics Canada (2003), taken from Bélanger, Doray and Levesque (2007).

^a Difference Quebec - other provinces statistically significant to the threshold of 0.01.

Table 4.2

Participation rates in work-related ALT* in Canada and Quebec in 2002
(employed population 25 years of age and older)⁵⁰

	Structured ALT only	Structured ALT and informal learning	Informal learning only	Total work- related ALT
Atlantic	7	31	33	71
Quebec	6	27^a	34	67^a
Ontario	5	29	36	70
Prairies	6	31 ^a	33	70
British Columbia	6	33 ^a	35	74 ^a
Total	6	30 ^a	35	70 ^a
N = 15,575				

Source: Statistics Canada (2003), taken from Bélanger, Doray and Levesque (2007).

^a Difference Quebec – other provinces statistically significant to the threshold of 0.01.

* To obtain the rate for structured ALT, add the “structured only” and the “structured and informal” columns. To obtain the rate for informal learning, add the “informal only” and “structured and informal” columns.

⁵⁰ The lack of correspondence between the data in Tables 4.1 and 4.2 is not surprising, since they do not involve the same populations (total as against employed). Thus, the data in the tables in Chapters 2, 3 and 4 cannot be compared for similar reasons.

If we consider job-related ALT for the employed population, Quebec is still slightly behind the Canadian average (Table 4.2). The difference is not significant when we look solely at structured ALT or informal learning.

Where this same structured ALT is sponsored by the employer, the data show that the rate of participation in ALT is slightly higher in Quebec than in Canada generally (Table 4.3). This situation is recent and shows that Quebec has changed a great deal in this regard. Incidentally, although it does not use the same statistical data, the *Commission des partenaires du marché du travail* (CPMT) has observed the same phenomenon:

the average rate (participation by employees in employer-sponsored training) was over 25% for the provinces of Canada other than Quebec and barely 15% for Quebec enterprises. Over the last five years, Quebec has shown the strongest growth (60%), while the participation rate in employer-sponsored ALT has increased from 15% to 24%, the Canadian average being 25% (CPMT, 2006, p. 3, transl.).

Note that the proportion of sponsored ALT remains high throughout Canada: three employers out of four subsidize job-related ALT.

4.2.2 ALT among production employees

ALT in firms has become a differentiated reality. The available literature makes an initial distinction among types of ALT designed for specific positions (manager, employee,). There are many divisions in the types of training but the literature on the subject suggests the categories that we will use throughout section 4.2. These categories cover the broad range of possible types of ALT while highlighting those used most frequently.

Adult learning and training for employees who produce goods and services occurs in the great majority of Quebec firms surveyed. Although in degrees that differ according to the size and sector of activity, this fact is confirmed statistically (see previous chapter). Whether we are dealing with corporate ALT, ALT for new hires, specific individual ALT, the training of trainers or individual participation outside the firm, firms use various types of ALT when the time comes to train their personnel.

Table 4.3

Proportion of structured employer-sponsored work-related ALT, by province, in 2002 (employed population 25 years of age and older)

	Proportion of sponsored ALT
Atlantic	77
Quebec	79^a
Ontario	74
Prairies	77
British Columbia	71 ^a
Total	75
N = 5,333	

Source: Statistics Canada (2003), taken from Bélanger, Doray and Levesque (2007).

^a Difference Quebec – other provinces statistically

► Corporate ALT

Corporate ALT is geared to production employees as well as professional staff and managers. Activities of this kind occurred in only some of the Quebec businesses studied by Bélanger *et al.* (2004). In these businesses, corporate ALT is in many instances initiated by management and directed by the human resources department in co-operation with an outside provider. In the case studies of very large companies in particular (250 employees), this activity was conducted only in-house.

Corporate ALT generally focuses on the organization itself, its values and its philosophy. The subject covered may be a very generic topic, such as customer service in the retail sector. It not only serves as a reminder but also strengthens knowledge and abilities that were already in place, as well as providing a tool to build the staff's loyalty and feeling of attachment to the organization.

Bélanger *et al.* (2004) find that in most cases, this type of training lasts a few days and is given annually, while participation is mandatory and paid. But the training does not necessarily occur on the premises, nor does it occur during working hours.

► ALT for new hires (or for new positions)

ALT for new hires, ranging from short presentations to a long-term sponsored⁵¹ process (for example, shadowing an expert employee for several weeks or even months), is a very common approach. In some of the companies studied by Bélanger *et al.* (2004), including those with strict quality standards, this is a priority and such activity will be highly structured, supported by reference documentation and followed by an evaluation of the new employee. In other organizations, in the retail sector, for example, the education and training is more likely to be of the "on the job" variety, given informally by a peer.

ALT for new positions is often similar to that given to new hires; in some firms this will involve the exact same education and training procedures and tools. It is designed primarily to introduce the employee to the new task, rather than to familiarize him or her with the company's operations and philosophy.

Generally, ALT for new hires is given in-house during working hours by a more experienced employee in the form of mentoring.

► Non-job-specific ALT

Firms provide general ALT activities designed to welcome and integrate employees. These activities allow new employees to familiarize themselves with the physical layout of the company, its philosophy, mission and products. For example, general ALT for new hires may include an introduction to the company, its rules, its different

⁵¹ The expressions businesses use to refer to this support vary: shadowing, buddy systems, coaching, mentoring and tandem work.

departments and its health and safety measures, the dress code, the hygiene codes and the procedures for moving among the different units of the company. In the tightly controlled biopharmaceutical sector, as in other sectors where quality control is mandatory (for example, food processing), an introduction to Good Manufacturing Practices (GMP) is important.

General education and training given to new hires is organized, especially in large firms, by the human resources department; management will be involved from time to time to give information on basic internal operations. Generally, this activity is undertaken by an experienced employee who has been specially trained for the purpose of giving direction to new employees.

Whether it takes the form of mentoring, a learning plan or a simple presentation, general education and training for new hires will be dispensed individually or in a group. Some firms develop a welcome protocol with supporting reference documentation for both the trainer and the new employee. Other firms organize activities in the form of courses lasting a few hours in each of the departments to provide a “practical” understanding of the organization. The recent trend observed by Bélanger *et al.* (2004) in Quebec is increasingly to improve the structure of ALT activities for new employees, especially in the area of occupational health and safety and quality control standards in the food-processing and biopharmaceutical sectors.

► On-the-job education and training for new hires or new positions

On-the-job education and training for a new position enable newcomers to learn the necessary skills and abilities to master their jobs requirements so that they can become operational more quickly.

This on-the-job ALT tends to be defined similarly across organizations: similar protocol, comparable tools and the same trainer profile. In most of these cases, on-the-job training is designed to integrate new employees into their position through mentoring by an experienced employee. The mentor must, for example, show the actions to be taken in accordance with prescribed procedures, explain the operation of equipment, answer questions, suggest adjustments, observe and re-explain, etc. Thus, the mentoring focuses on the requirements for performing the duties of the position in question. In sectors where production is regulated (e.g. biopharmaceuticals), Bélanger *et al.* (2004) in particular note that on-the-job training given to new hires includes an intensive segment on quality control as it specifically applies to the position in question.

The mentorship process observed by Bélanger *et al.* (2004) shows that, as a rule in both industrial sectors and in services sectors such as the retail sector, a new employee will accompany his or her mentor or be accompanied by the mentor in performing his or her duties for several days (sometimes weeks or months). Subsequently, whenever necessary, the relationship with the mentor will continue in an informal manner for the purpose of longer-term monitoring. Once the training given to new hires is completed, some companies evaluate the employee’s satisfaction and his or her suitability for the position.

► *Ad hoc education and training*

Ad hoc education and training activities are organized primarily around the arrival of new equipment and the establishment of new procedures, or new health and safety or quality standards. One food-products company, for example, organized training and information sessions when it developed links with university research centres and government programs designed to support innovation, which required it to change its procedures and products (Bélanger *et al.*, 2004).

► *General staff education and training*

Various specific education and training activities that are less directly linked to the employee's job are offered: computer training, language courses, management courses. In some cases, the organization will ask everyone to recruit volunteers, in other cases it will target a particular department. In the cases studied by Bélanger *et al.* (2004), these kinds of activities often have a proactive value and meet a need for mobility and professional development of the employees. For example, in one large food-processing company, language courses are offered to everyone because of the company's interest in increasing exports.

The research of Bélanger *et al.* (2004) shows that this kind of participation in ALT activities is often instigated and paid for by the employer, despite the fact that it is usually given outside the organization. Public education institutions (CEGEPs, universities and school boards) and private service providers are often the provider. Reimbursements of the cost of these courses is often part of the mandatory 1% budget dedicated to ALT, as required by the Quebec Act to foster the development of manpower training.

► *On-the-job education and training when changes occur during a person's employment*

During a person's employment, on-the-job education and training meet a need for operationalization and suitability for a particular position by updating the employee's skills. Usually, on-the-job training is designed to introduce and integrate new equipment, a new procedure or a new product. This involves making it easier to handle new equipment and put in place a new work technique or organization.

On-the-job training in some of the large industrial companies studied by Bélanger *et al.* (2004) sometimes consists of two parts: a theoretical "in class" part, which is tied into a practical part involving the application of the technique. For its part, training in new products or new equipment is generally given by the supplier and may be given in the company or on the supplier's premises ; in the latter case, it sometimes takes the form of a "one-day fair". Mentoring by a more experienced employee occurs in the cases studied as a form of supervision of training, but usually the trainer comes from outside. For example, one company decided, in order to better integrate a new computer system for managing operations, to combine several training strategies. The company

decided, together with a consultant, to combine several training strategies and to focus on the active involvement of the various work teams. The technical training of the staff was divided between internal and external providers; employees were trained to give training and there was even room to adjust and reconfigure the system, together with the consultants, to reflect the company's general requirements and constraints and the particular characteristics of the different departments. Finally, individualized follow-up was provided, with the co-operation of the employee trainers, for each position on request.

► Standards-related training

Different standards govern the work of production employees. A number of companies organize short refresher courses and updating sessions on an ongoing basis to reflect the frequent changes in the standards imposed by government agencies, among others. Moreover, some of the companies studied by Bélanger *et al.* (2004) put in place systems (training records for each employee, registration, control and review of new procedures, etc.) to show that staff members have been trained and are applying the new standards.

The businesses operating in sectors like food processing and biopharmaceutical production must strictly observe standards governing the quality of the process and the product, including control of the manufacturing process of sterile products or control of hygiene and microbial contamination. In the food-processing sector, there is HACCP certification,⁵² especially important for companies wishing to export their products, which imposes hygiene and food safety requirements. The rules contained in *Good Manufacturing Practices* are the source of many training courses in these types of businesses. Given the consequences of the slightest breach of these rules, such as mishandling of hazardous products, companies require their employees to engage in short specialized training activities, which often take the form of mentoring.

To prevent accidents at work and in order to adopt safe practices and to know how to react in emergencies, occupational health and safety becomes an important dimension of ALT activities provided to production staff. Thus, many short specific training courses are given to staff to help them master the new techniques introduced into the company or to prevent accidents at work. Some of these courses in health and safety are required by the *Commission de la santé et de la sécurité du travail* (CSST), including first-aid training.

⁵² The *Hazard Analysis Critical Control Point* (HACCP) is a system for managing food-processing procedures that takes a preventive approach to correcting any error in the process that impacts on the finished product. Application of the HACCP standards is supervised by the Canadian Food Inspection Agency.

► *Training the trainers*

Firms in Quebec make frequent use of in-house trainers. While describing the education and training provided to production employees, we have often noted the preponderance of mentoring-based ALT through. Mentoring is designed to better integrate new employees into the organization, to teach the tasks to be performed and to standardize work practices. Marchand *et al.* (2007) stress the effectiveness of a tool such as learner-pairing in transmitting tacit knowledge. Two factors are thought to govern the success of the pairing relationship in their case study of Quebec companies: "pairing requires the commitment and active support of superiors. Also, the training of trainers is important and deserves to be extended to all persons whose duties include conveying professional knowledge" (CPMT, 2007, p. 1; transl.).

The relatively new practice of training mentors, which is geared to the emerging system of providing ALT for new hires, has become a strategic activity, according to some of the businesses studied. Then who are these internal trainers and how are they trained, if they are trained?

Trainers may be recruited on a volunteer basis among employees. In most of the cases observed by Bélanger *et al.* (2004), however, in-house trainers are experienced employees selected by a superior (their foreperson, manager or a human resources adviser) to train their peers. As a rule, these employee trainers are selected for their technical knowledge and communication skills. In some of the firms studied, they are selected on the basis of criteria that are more or less observable and expressly stated, such as an ability to communicate or a sense of responsibility, while in other companies the selection process is strictly organized (examination, interview, calculation of seniority) and judged against yardsticks set out in the collective agreement. One example of a formalized and highly structured selection procedure is provided by a very large biopharmaceutical company that asked its employees who were interested in taking two-year positions as full-time trainers to submit applications and pass appropriate tests. The employee found to be suitable and possessing the most seniority is given the position in question. Thus, it is necessary to distinguish between in-house training given expressly by trainers selected and trained for the purpose, and less structured coaching.

There are situations (Bélanger *et al.*, 2004), regardless of a company's sector or size, where employee-trainers, despite their involvement and the recognition of their status, do not receive any training for their particular role as trainers. Some of these companies are in the process of systematizing this kind of training. For most large firms, however, the training of trainers tends to become systematic and resourced. Some of the firms studied, in which the position of mentor is key, often because training of new hires or for a new position is a priority for them, show their interest by offering certified training and by giving the employee trainer a salary increase.

Training courses for trainers are structured to varying degrees. The most structured types of training observed consist of three parts: a theoretical part, a practical part and a follow-up session offered some six months after the person joins the company. In some types of training, attention is paid above all to mastering a sophisticated piece of

equipment, although in most cases, the training of trainers focuses on issues such as communication skills and training strategies. The employee trainer may, for example, have tools such as a training manual that cover all of the content to be conveyed, as well as reminders describing procedures and standards.

► *Individual education and training obtained outside the company*

Less common than other types for production employees, individual ALT obtained outside the company meets a need of certain individuals for personal and professional development. The tendency in Quebec is to support individual training received outside, principally in the case of more qualified staff and managers. However, learning opportunities of this kind may also be provided to enable less qualified employees to obtain basic general training.

Firms respond differently to this need. Some of the organizations studied by Bélanger *et al.* (2004) have policies that encourage employees to take courses in recognized institutions – CEGEPs and universities being the preferred locations for this. Thus, in some cases, course fees and the cost of educational materials are reimbursed in whole or in part, and employees receive time off to compensate for the time devoted to training. Where financial support is provided, the approval of a superior is required ahead of time. Bélanger *et al.* (2004) note that these incentives are not present in all companies and that in those that do offer them, some senior or junior managers resist the temporary reduction in the workforce. Among the courses for which fees are reimbursed, a small number of the companies studied favour education that is not work-related such as courses promoting personal development and physical fitness.

The firms observed by Bélanger *et al.* (2004) that recognize and encourage individual training taken outside the company feel that these ALT activities contribute to the success of the company. In other companies, this kind of ALT is tolerated, if not valued, and certain concessions are made, such as allowing employees to leave work early in order to attend courses (up to an hour of work at the end of the day).

4.2.3 ALT for Management (Management or Executive Training)

ALT for management in Quebec, as in other advanced industrial societies, is developing in response to the demand created by the challenges of reorganizing management and human resources, expansion or the need to adapt to new technologies. Many types of additional ALT activities required or requested by various managers can be added to these responses: refresher education in accounting and the pay system, introduction to a new time-recording technique in human resources management, etc. Some firms tend to give priority to ALT for management. In fact, in one case observed by Bélanger *et al.* (2004), a head office invested a great deal in the education and training of its managers, so much so that this constituted one-half of the company's ALT activities.

The progress made in the 1970s in this area in Quebec, and the explosion of managerial literature at that time transformed the education and training of managers. Since then,

however, executive and managerial ALT in Quebec has tended to remain conventional in both form and goals.

We should note that managers are usually included in general corporate education and training activities. Whereas ALT for new hires has become a widespread priority, fewer firms tend to offer such activities to newly hired managers (Bélanger *et al.*, 2004). The firms affected do so by mentoring new or young managers, but it seems that the mentors are not given any organized preparation to that end.

To be sure, one very large biopharmaceutical company stands out in the study by Bélanger *et al.* (2004) for its very elaborate process of developing mentoring for young or future managers. Under this program, some thirty-five employees, selected in advance, are each paired with a mentor from the senior ranks of company management. At the start of the program, mentors will receive training in interactive communication, empathy and the ability to convey knowledge and expertise, while participants will also be entitled to a preparatory session to help them define their own areas of interest and specific training needs in order to create more balanced and less dependent interaction with the mentor. The program lasts twelve months and involves at least one hour-long meeting each week. The content varies with the mentoring pairings.⁵³ This particularly innovative example seems for the time being to be an exception in the area of ALT for management.

As in the case of ALT for production employees, we find various types of specific activities of a general nature or specific standards-linked training courses for managers. The general activities designed for managers, which are valued and frequent in the cases studied by Bélanger *et al.* (2004), deal, for example, with the importance of service and a good knowledge of the products, a knowledge of English to permit better communication between the managers and customers in new foreign markets, recruiting, staff selection and management, preparing requests for outside training, methods of conducting interviews, marketing, stress management, etc.

Specific education and training may be more focused in order to reflect the more individualized responsibilities of managers in the different sectors: writing reports, conflict negotiation, stress management, team work, prioritizing work.

In the case of standards-related training in the companies observed by Bélanger *et al.* (2004), many short specific courses are given to managers to teach them how to better manage technical health and safety issues or to give them a better knowledge of the legislation and regulations in this area. Such training is given primarily by outside providers or educational institutions.

The choice of ALT for managers also depends on the company's context. The level of investment in such ALT will differ with the size or nature of the company (e.g. franchise operation or independent company). For example, the training provided to the managers of one small company studied by Bélanger *et al.* (2004), i.e. the founder, his two sons and a supervisor, seemed aimed at encouraging resourcefulness and a do-it-

⁵³ Strategic planning, advertising and marketing, methods of analysis, quality control, communication, etc.

yourself attitude, or more thorough training for up-and-coming managers. The chain with which this company is affiliated makes management training activities available to it, but for a price: approximately \$300-400 per activity, not to mention additional costs in salary and travel. However, one member of management did manage to take a self-financed distance training course organized by the chain in partnership with a university.

A large proportion of the education and training activities for managers observed by Bélanger *et al.* (2004), unlike those for production employees, are the result of individual initiatives. Generally, these courses focus on personnel management, marketing, leadership and communications. Support for individual professional development occasionally takes the form of time off and more often of reimbursement of the course fees.

4.2.4 Continuing education and training of professional staff

The continuing education and training of professional staff and highly qualified employees differ from those of production employees much as they do from the education and training of management. Consequently, we will briefly describe the features of this group of employees for whom training is essential, given the need for constantly changing and exacting knowledge and skills that characterize their professional activities and, more broadly, for continuing professional development.

Bélanger *et al.* (2004) observe that the continuing education of professionals and highly specialized staff and analysts is usually delivered outside the organization by external regulatory agencies, specialized institutions or consulting firms. The company provides financial support. Courses relating to in-house technical training or production planning are planned and organized by the department responsible for quality. Demand for seminars, conferences and training leading to certification is initially expressed almost exclusively by individuals. The immediate superior will also regularly suggest upgrades to reflect the frequent changes in regulations. ALT provided by mentors is very important when qualified personnel are hired. However, most continuing professional development activities for specialized staff take the form of self-learning assisted by documentation services or informal meetings.

4.3 Recognition of and support for informal learning

Structured in-house ALT activities form only part of the overall reality of learning. Beneath this visible tip of the iceberg (Livingstone, 2003), there lies a whole range of informal learning and group and individual self-directed learning. To what extent do firms recognize this reality and take it into account? What are its characteristics and specific features in light of the different objectives and contents of learning? How are these informal activities supported? Finally, how are structured ALT and these informal methods of professional development interwoven in the various businesses?

It should be pointed out (see Table 4.1) that in the total adult population, the participation rate in informal job-related learning is quite high in Quebec (45%) and in

Table 4.4

Participation rates in informal job-related learning, by size of firms, in Canada and Quebec in 2002 (employed population 25 years of age and older)

	Canada	Quebec
Fewer than 20 employees	61 ^a	57 ^a
Between 20 and 99	62 ^a	57 ^a
100 to 499	63	60
500 and over	67	64
Total	64 ^a	61 ^a
	n=12,891	N=3,147

Source: Statistics Canada (2003), taken from Doray and Bélanger (2006).

^a Canada-Quebec difference significant to 0.01

Table 4.5

Participation rates in informal work-related learning, by professional status, in Canada and Quebec in 2002 (employed population 25 years of age and older)

	Canada	Quebec
Managers & Professionals	78	75
White-collar workers	59	56
Blue-collar workers	54	48

Source: Statistics Canada (2003), Taken from Bélanger, Doray and Levesque (2007). Difference significant to 0.01 between the rate of informal job-related learning and each professional status

Canada more generally (48%). Moreover, for the employed population, informal learning alone has a participation rate of 34% and alone accounts for one-half of job-related training by type of training in Quebec and the rest of Canada (Table 4.2).

Table 4.4 shows that Quebec lags behind Canada in terms of participation by workers in informal job-related learning; this gap is small but significant for small and medium-sized companies (fewer than 100 employees) in Quebec. Thus, as in the case of structured education and training where the gap is more pronounced (Table 2.4), the greater the size of the company, the better an employee's chances of participating in informal learning.

While the difference in rates of involvement in informal learning in Quebec and Canada seems to be

impacted by company size, the professional profile of employees is also similarly influential (Table 4.5). In both Quebec and Canada, informal job-related learning tends to be more frequent among managers and professionals. The gap still exists between employees, regardless of professional status, in Quebec and Canada, but it is especially marked among blue-collar workers in Quebec, who are least likely to report informal learning. Table 3.6 shows, in the area of structured ALT, a similar relationship for each category of professional status, although the difference between Quebec and Canada in 2002 was virtually non-existent in that case.

Looking at the participation rate in informal job-related learning by sector of activity, we see that this kind of learning tends to be significantly weaker in three sectors, both in Quebec and Canada: the primary sector, public services and transport, and personal and corporate services (Table 4.6). This means that only about one employee out of two, in these three sectors in Quebec, report informal learning related to his or her work.

Table 4.6

Participation rates in informal work-related learning, by sector of activity, in Canada and Quebec in 2002 (employed population 25 yrs. and older)

	Canada	Quebec
Primary sector	56	46
Manufacturing	60	57
Public services and transport	51	52
Commerce	60	60
Finance, insurance, professional & technical services	73	67
Education, information and culture	76	73
Health	68	66
Personal and corporate services	58	52
Public administration	73	73

Source: Statistics Canada (2003), taken from Bélanger, Doray and Levesque (2007).

Difference significant to 0.01 between the rate of informal job-related learning and each sector of activity.

The question is not simply whether informal learning takes place. It is clear that the various groups of personnel organize, develop and mobilize their skills through their involvement in the organization's activities, at their work post and within their work team. Rather, the question is whether the company recognizes this "tacit" reality and takes this into account in its overall ALT strategy. Almost everyone is involved in informal learning, 60% of people mention it overtly according to the statistics, but the issue here is the support given by the firm to informal and self-directed learning.

As observed in one sector, support for informal learning is very pronounced according to the level of the personnel. "Unlike other occupational groups, especially workers in production units, informal learning is the preferred method of continuing professional development for researchers" (Bélanger and Daniau, forthcoming, p. 8; transl.). For example, some firms, especially in the case of highly qualified staff, support self-directed learning by paying fees and subscriptions to professional associations and scientific bodies, making a large scientific library available to staff,⁵⁴ developing interactive individual education programs and providing electronic access to databanks. Participation in scientific conferences or seminars will be followed, when the participants return to work, by a report or presentation to colleagues to ensure that the latest knowledge is disseminated.

Bélanger *et al.* (2004) note, however, many unrecognized supports to or opportunities for informal learning: the creation of mechanisms for consultation and discussion with employees, ranging from the traditional suggestion box to weekly or monthly

⁵⁴ For example, a library that is open 24 hours a day, served by five full-time librarians, containing 2,500 types of courseware on CD-ROM and audio-/video-recorded courses.

consultation sessions at different levels of the company, including participation by employees in committees or working groups on health and safety, customer service and introduction of new technology. During the hiring process, consideration is also given to the professional experience of the more specialized staff. In all firms that opt for some form of mentoring, there is also recognition, at least implicitly, of the accumulated learning of the employee-trainers who are selected specifically for their expertise and professional experience.

Finally, wherever coaching or mentoring has been implemented, there are inevitably informal processes for transferring knowledge and know-how, and recognition of team-based learning among peers concerning the “tricks of the trade”. The company newspaper or newsletter is also a useful institution in that regard (Bélanger et al, 2004).

Furthermore, the fact that a business and its managerial staff recognize the variety of ways employees can approach an assignment or a particular job, and the fact that they acknowledge individual initiatives to interpret and improve how a prescribed task is carried out, may well translate into an encouragement of informal learning. Bélanger et al. (2004) made this observation in certain work units in the food-processing sector, which recognized the technical complexity of certain tasks such as sharpening knives and took into account the different ways of doing the work (Chatigny and Vézina, 2004). The authors observed the same phenomenon in other companies, where workers succeeded in inventing their own ways to memorize the product classification codes and manage inventories. Limiting oneself to the task required and forgetting the tension between prescribed actions and actual practice may be the most subtle but at the same time the most profound refusal of informal learning (Teiger and Montreuil, 1996).⁵⁵

What factors encourage recognition of informal learning and the organization of support for these invisible forms of learning? From the perspective of social psychology, it is possible to analyse the genesis of informal and self-directed learning behaviours that then appear to be the result of a meeting between personal and attitudinal factors relating to an individual’s journey, on the one hand, and, on the other hand, events and circumstances that have occurred at specific times in the subject’s social and educational environment (Meignant, 1991). However, these individual journeys, like the social environments, can be understood only in their context. What, in fact, are the conditions or factors that promote or impede the development of attitudes linked to an active educational biography or even the emergence of events that encourage self-directed learning?

In the companies studied by Bélanger et al. (2004), the authors detected various factors. First, there was the type of work organization. In sectors that were more closely linked to the knowledge economy, it is in the company’s interest to support mutual learning among colleagues. The actual organization of the work, where the task itself can be performed in different ways and requires different forms of learning and innovation,

⁵⁵ See also the special issue of *Relations industrielles: “Ergonomie, formation et transformation des milieux de travail”*, Vol. 56, No. 3, 2001.

facilitates the development of self-training. Does this mean that the organization of industrial production work, namely in the production units of the pharmaceutical or the food processing sector or even in most less-specialized retail businesses, impedes the development of informal learning? The answer is not necessarily, because even in those unspecialized production sectors, the authors observed some firms that supported informal learning. The contribution of the employees, even those with repetitive tasks, in terms of solving unforeseen problems and improving production protocols, is at times recognized. The same is true in some firms that, when a particular crisis occurs, have made use of more active unplanned employee participation to solve problems. The difficulties associated with planning structured training, where there are not enough employees and where the variety of timetables preclude this, lead these establishments to support self-directed learning.

The different types of skills to be mobilized may bring about the development of not only structured training but also informal learning and, consequently, support for self-directed learning. There are skills and experiences that are not, and perhaps cannot be, part of structured education and training. Examples abound of skills that are not coded and not transferred solely through structured training, of knowledge that is not institutionalized and yet of strategic value in daily productive activities: experimenting with a new budgeting system or a type of equipment; knowledge accumulated by experience on the company's specific market in order to engage in better daily planning of deliveries; anticipating the possibility of a mechanical breakdown; knowledge of the local vocabulary of a given trade or company in order to be able to name specific equipment or products .

Hence, the work-related learning demand evolves in light of shortcomings in the ALT offered and of the development of new approaches to obtaining qualifications.

Work-related adult learning and training is becoming a complex process of activities, consisting of successive stages that are increasingly integrated and geared to effecting real transfer of learning into action. Our report on the development of ALT in Quebec emphasizes the importance of often-concealed "upstream" and "downstream" stages, namely those of expression of learning demand and comprehension of needs, and of evaluation.

5 ALT ENGINEERING: PLANNING, EVALUATION & FOLLOW-UP ⁵⁶

5.1 Expression of demand ⁵⁷ and planning

What are the processes for expressing and identifying the work-related learning demand in Quebec? How does the organization define and articulate its education and training needs? How does it construct its programs and activities? Are there mediation mechanisms for the expression of employees' demands and aspirations? Are the patterns of upstream and downstream intervention similar or different, depending on the sector, company size or level of qualification of the staff? The period prior to the provision of education and training is a critical phase in the structuring of company ALT (Bélanger and Federighi, 2000).⁵⁸ By observing the various practices, we can better understand how far ALT activities are rooted in firms' productive activity.

The first observation is that the programming of ALT and, earlier, the systematic diagnosis of needs are relatively new activities in Quebec. They were new activities in virtually all the companies studied by Bélanger et al. (2004). Significantly, only a minority of firms involving high intensity of knowledge, such as in the biopharmaceutical sector, have a longer tradition in this regard. In these firms, needs diagnosis has become a regular practice.⁵⁹ Among others, the creation of a full- or part-time position dedicated to organizing ALT (hence, an upstream position) is a rather recent trend.

Often, as noted earlier, the first action of the new person in charge is to draw up a general inventory of training needs and to devise an overall plan. This plan may also be developed within the general framework provided by the head office. However, it is more difficult to move on from overall planning to more specific programming. In doing this, the organization will take into account the situation that exists in the different production units. The annual ALT plan is usually developed in cooperation with the production heads and forepersons who assess the needs in their units. It may

⁵⁶ The data for this chapter were derived primarily from Bélanger, P. Larivière, M. and Voyer, B. (2004). *Les pratiques et l'organisation de la formation en entreprise au Québec* Étude exploratoire. Montréal: UQAM et CIRDEP.

⁵⁷ "Expression of learning demand" is a new concept introduced in Quebec's *Government Policy on Adult Education and Continuing Education and Training*. Within this new perspective, the general aim of this policy is not only to meet the explicit learning needs of people and organisations, but, beforehand, to encourage and support the *expression* of the demand for learning and, then, to explore and organise appropriate and relevant responses. See Quebec (2002), *Government Policy on adult education and continuing education and training*, Quebec. P. 5, 'Rationale and basis of the policy. For a further exploration of the concept of "expression of learning demand," see Chs. 6 and 7 in: Bélanger, P. and Federighi, P. (2000). *Unlocking people's creative forces: a transnational study of adult learning policies*. UNESCO Institute for Education.

⁵⁸ Pp. 117, 121-126, 130-132.

⁵⁹ This is particularly clear in the case of training of trainers and the practices of a company's continuing training department. In the other two cases, it is the training section of the human resources department that will be involved at this level.

subsequently be approved by the middle management committees that consider human resources issues at their meetings. The production heads also become involved in supervising the assessment of needs, advising and consulting the forepersons for this purpose and sometimes contributing to the training of the trainers.

The company's size and the sector of industry in which it is active influence the process of expression and definition of the learning demand. In a smaller organization, for example, the activity that takes place prior to training tends to be limited to informal diagnoses and summary decisions by management. The demand tends to be analysed on a rather spontaneous basis, without an organized approach except, for example, where an *annual training day* is organized, and often this task is then entrusted to an outside consultant. In small businesses, it is not easy to separate or distinguish staff hiring and supervision practices from the execution and management of ALT.

The learning demand in an organization consists of both the requirements or needs of the organization and, on the other hand, the aspirations and constraints of individuals. In short, the learning demand is always a social demand that grows out of a more or less structured mediation between these two components: the production requirement of the organization and the expectations of individuals. External factors also influence the way in which the upstream activities of ALT are organized in companies. These factors, which are certainly always decisive, vary with the economic sector involved and result in different ways of diagnosing and programming ALT activities.

5.1.1 Organizational requirements

The learning and training demand originates in firms' changing needs and requirements. In the case of retail businesses, for example, the stiff competition experienced by some specialized companies leads to an important change in the role of employees, from that of salesperson to that of adviser, and this allows the organization in question, as a result of improved relations with the customer, to gain a comparative advantage from this change. This upgrading of tasks and increased independence of functions lead these businesses not only to diagnose their needs in new ways but also to plan the education and training to be provided in different ways. Training of a salesperson then becomes strategic; it contributes to an increase in the company's productivity.

The situation is completely different in other less specialized and higher-volume retail businesses. The lowest level of qualification for salespersons, staff turnover, more tenuous communication between salesperson and customer and the volume of customers to be served lead to more limited learning demand and, as a result, tend to limit the necessity for a more sustained diagnosis of needs and for planning of ALT that will be given fairly quickly by peers when a person is hired.

External pressure from regulatory agencies also plays a role in the demand for training of operators. Thus, the quality standards imposed from outside are decisive in defining training needs. In food-processing companies and, even more markedly, in the biopharmaceutical sector, quality requirements, the need for strict observation of Good

Manufacturing Practices (GMP) — a prerequisite for these companies to obtain and maintain their certification and thus their licences to export their products — have profoundly changed the nature of, and are constantly changing the demand for, training of operators and the staff who supervise them.

Internal crises can also change the learning demand and force an organization to reassess its needs. In one company in the food sector, for example, the introduction of a new management system, following an initial unsuccessful period of introducing the new technology, led to a change in approach, to the more active involvement of staff in defining and solving the problems and recognition of informal team-based learning as an inevitable strategy. The need to stimulate horizontal communications and to involve different work teams more intensely, to strengthen the capacity of these groups for resolving problems and snags has helped to profoundly change the learning demand, which was initially more limited and more adaptive.

The upstream organization of ALT tends to vary substantially with the type of staff. In the case of managers, practices tend to be more institutionalized (Bélanger *et al.*, 2004) and the definition of needs and the programming of ALT are less frequently reviewed. Senior management tends to play an important role in determining training needs in co-operation with other levels of management, and this is generally done in accordance with models that seem increasingly standardized because of the increasingly homogeneous proposals that are received from external consulting firms and educational institutions. This is a process that tends to be less contextualized from one organization to another than for production employees, for example.

An interesting exception was observed in a major biopharmaceutical company (Bélanger *et al.*, 2004). Dissatisfied with preconceived education and training programs for managers, the company in question experimented with a completely new approach focused on a renewed design for mentoring. Substantial efforts to diagnose needs were then made by both those requesting ALT and more experienced managers prepared to act as mentors. The ALT was planned as a result in a way that was both more individualized and more closely reflected the concrete needs of the organization.

ALT for managers and professionals, which has developed substantially over the last three decades, tends to be organized around two poles: a number of ALT activities covering the major basic management skills, training given by outside agents and a support system for individuals wishing to continue their personal development through participation in outside activities. Some indicators suggest a tendency to expand the demand for training of managers, professionals and scientists. In the case of managers, the need to reform management methods and prepare replacement managers leads to more endogenous strategies based on mixed forms of ALT (mentoring, assisted self-directed learning,⁶⁰ seminars, etc.), which are combined with additional forms of education and training taken externally or offered by specialized firms.

⁶⁰ See the writings of Philippe Carré (1992) and the work of Roland Foucher (2000) on assisted self-teaching and the writings of Renée Houde (1995) on mentoring.

For professionals and scientists, changes in the organization of work in the direction of multidisciplinary teams created to perform time-limited mandates is leading to a new learning demand not only for the acquisition of scientific and technical competencies, but also for soft skills such as the ability to work in a team, resolve problems, plan duties, etc. This knowledge and this know-how rarely form part of the initial education programs of these professionals or scientists (Sirois, 1995, p.129 ff.). These new forms of organizing work in laboratories and other professional units, which take the form of research or working groups organized around a specific project, are also transforming the learning demand.

5.1.2 The individual dimension of work-related learning demand

While the learning demand in a company is a construct made up predominantly of the organization's requirements with respect to the transformation and conditions of production, but also the aspirations, perceptions and constraints of the organization's individuals, and while the expression of outside demand, namely production requirements defined by the company and outside regulating forces, is a key element in the observed processes of diagnosing needs and planning ALT activities, the same cannot be said of the consideration given to of the needs and expectations of the various groups of personnel (Bélanger *et al.*, 2004). The first observation is that participation by managers and professionals in the expression and definition of the learning demand that affects them tends to be much better articulated than that of operators. Even in this respect, the situation varies from one company to another. Some companies, aware of the positive impact of staff participation in ALT, even when ALT is mandatory, institute mechanisms for participation such as committees and consultation processes on technological change that allow employees to discuss the ALT dimensions or requirements of these changes.

In three of the five unionized companies studied by Bélanger *et al.* (2004), mechanisms were negotiated that allow employees, acting through their union, to make known and, where necessary, negotiate their needs and expected conditions for education and training. In one organization in the food sector, the presence of a union had facilitated the expression of learning demand. In a biopharmaceutical company, this concern has even taken up an entire chapter in the collective agreement, covering the question of training for trainers, participation in committees that define needs and the conditions governing time off. The transformation undergone recently by an establishment in the same sector has even led the union to sound the alarm concerning employees' learning needs, so that the employees have an easier time meeting the requirements of their transformed tasks. However, in two of the five unionized workplaces involved in that study, the union is not involved in any way in defining the learning needs of personnel. Similarly, Charest (2007a) notes that in Quebec in 1998 "more than one-half of collective agreements covering 50 and more private-sector employees still do not contain a general clause on the subject of ALT" (p. 240; transl.).

While the mechanisms for expressing demand for staff training are usually weak, if not entirely absent, the fact remains that forepersons, managers, trainers or mentors in

some companies tend to play an informal mediation role. Thus, as was observed in one organization, the crisis caused by a major but poorly introduced technological change first created passive resistance and then, following a collective reaction, led management to review the speed with which the new technology was initially introduced and the ALT plan and method proposed by the outside consultant.

In production units, we are witnessing in many respects a process of expanding demand for education and training. In a biopharmaceutical organization, for example, when education and training needs were assessed, several employees referred also to stress management and needs for basic information on healthy eating in the workplace. With respect to recognition of prior learning, and professional experience of employees, of the 15 companies studied by Bélanger et al. (2004), only two made express mention of this, albeit without putting in place mechanisms to recognize and validate informal learning. In its own 'train the trainer' program, one organization in the food sector will take into account employees' professional experience and hence the need for the trainer to keep each employee's prior experience in mind.

In a second case, a company in the biopharmaceutical sector recognized the professional experience of its production employees, so much so that when new equipment was introduced, it asked some of these employees to visit other plants to observe the manner in which the new equipment was handled and how the work teams were prepared so as to ensure that the different problems that may arise on a daily basis could be foreseen and then resolved. This company also regularly calls upon its operators to prepare a first version of its education and training materials and guides, which are then polished and edited by an outside firm.

With respect to the recognition and validation of prior learning, the situation is currently changing because of the development, by the *Commission des partenaires du marché du travail*, of the *Cadre de développement et de reconnaissance des compétences* [Skills development and recognition framework] and the role in recognizing experiential achievements that the sectoral committees (CSMOs) are asked to play after the occupational profiles have been defined.

5.2 Evaluation, follow-up and transfer of ALT

For an overview of the practices used to evaluate ALT in firms, we will use the taxonomy employed by Kirkpatrick (1998), while recognizing that he tends to neglect the dynamics between structured ALT and learning that occurs through action (Lave et Wenger, 1991) and that he tends to underestimate, at the fourth level, the beneficial impact of ALT investment on the deployment of a learning culture that integrates employees' career plans into the continuing professional development of individuals. This taxonomy provides key categories needed to distinguish and interpret practices that occur subsequent to the training (see Figure 5.1).

Figure 5.1

The four levels of evaluation of ALT in organizations*

Level 1	Evaluation of satisfaction <i>Did people “like” the training?</i>
Level 2	Evaluation of what was learned <i>What knowledge and techniques were learned and what attitudes were changed?</i>
Level 3	Evaluation of changes in daily practices and participation as a result of ALT <i>What observable changes have been made in daily practice as a result of ALT?</i>
Level 4 ⁶¹	Evaluation of the impact of the activity on the organization and on the attainment of its objectives <i>What are the spin-offs of the program for the organization’s activities? What are the benefits of this investment in terms of productivity and quality improvements? Did the activity make it possible to change the culture of the organization with respect to continuing professional development?</i>

* based on Kirkpatrick (1998)

To what extent, then, are the evaluation and monitoring strategies — the ‘downstream’ phases of ALT engineering — developed in Quebec? What monitoring and evaluation activities exist in Quebec firms? How do they position themselves in relation to the four levels noted above? Why are the downstream strategies concealed in certain situations and in certain companies?

The latest survey of employers subject to Bill 90 in Québec (Lapierre *et al.*, 2005) made the following findings: in 2002, 49% of the employers who funded ALT evaluated all or some of the ALT activities, compared with 59% in 1998. In 2002, fewer than 15% of employers subject to Bill 90 frequently evaluate their activities at one or more levels of the Kirkpatrick model. Based on the results of the study by Lapierre *et al.* (2005), it would appear that 30% of employers evaluate satisfaction, 35% the skills acquired at the end of the training and 29% the transfer of learning to the work situation. Level 4 of the evaluation, which looks at the impact on the organization and its activities, is virtually non-existent.

It is interesting to compare these results with similar data from the United States (see Dunberry, 2006, pp. 9-10): while more American businesses report ALT activities (over 70%) than do Quebec companies, they are more inclined to limit evaluation to the first level whereas Quebec firms that conduct evaluation tend to do so at Levels 1–3, which enables the companies to better judge the benefits of their ALT activities. It should be

⁶¹ Dunberry (2006), following Phillips (1991), adds a fifth level: financial return.

noted that Quebec firms tend more frequently to evaluate work behaviour following the training, which testifies in many cases to the active participation by production units in the evaluation of ALT interventions.

At the conclusion of his survey of twelve Quebec firms considered to be high performers in ALT by the sectoral committee (CSMO) representing them, Dunberry (2006) found that “there are practices for the evaluation of formal and informal training in all of the high-performing companies surveyed”, but “these practices are designed first and foremost to ensure that education and training contributes to a quantitative and qualitative improvement in production and services” (Dunberry, 2006, p. 35; transl.). Practices for evaluating training at levels 4 and 5 are uncommon, but virtually all these companies make it a systematic practice to evaluate their ALT activities, and these evaluations focus primarily on determining the level of satisfaction and what has been learned and then, to a lesser extent, behaviour on the job following training. The distribution of evaluation practices in these 12 companies among the different levels in Figure 4.1 is similar to that noted above (Lapierre *et al.*, 2005) for all Quebec firms, although they are used more frequently.

In the companies studied by Bélanger *et al.* (2004), detailed evaluation of the activity covering all four levels is also rare, with only one company having done this in only one of its programs. This was a biopharmaceutical organization and it had a university research centre conduct a four-level evaluation of its new approach to mentoring. The long-term goal was to evaluate the impact of new programs on management restructuring and renewal that was under way at the time and thus to determine the benefits of this major investment. Interviews with immediate superiors, mentors and mentorees were the immediate sources of information for this evaluation of the new program. We should also note the practice in some retail businesses of evaluating the training of salespersons with respect to quality of service (Bélanger *et al.*, 2004). The need to ensure that the salespersons are putting into practice their expanded new role and acquiring the new qualification is linked to the company’s need to gain a leg up in a very competitive market.

In short, we find very little evaluation of (a) the impact of education and training on the organization, and (b) its financial performance, and there is also very little formal integration of the evaluation data at the various levels. Also, formal evaluation practices make only a limited contribution to guiding the ALT policy and consequently they do not help to advance the recognition of its contribution in the overall strategy of the organization.

That systematic efforts to evaluate education and training in organizations in Quebec are still limited should come as no surprise. Kirkpatrick found that while evaluation and monitoring of the results are common practices in businesses in the areas of production and sales, such practices are much less common in the area of ALT. Often marked by a philanthropic approach or a normative vision,⁶² ALT is too easily assumed to produce positive results in and of itself.

⁶² In the sense that ALT is bound to contribute something and that being trained causes no harm.

The reasons cited by Dunberry (2006) from the international (and particularly the American) literature for eschewing training evaluation practices cast light on the low rates observed in firms, and the fact that evaluations often focus only on the satisfaction of the parties involved (level 1). The presence or absence of a continuing adult learning and training culture as an integrated component of the organization's development scheme is not unrelated to the various impediments to the development of a system for evaluating ALT activities in firms. The reasons given are many: lack of express demand ("nobody asked for an evaluation") and lack of interest, fear of the consequences of such practices or the "risk of showing that a poor training decision was made by a senior level of management". Other practical difficulties were referred to, such as "costs, lack of appropriate training and lack of time"; this makes sense, especially for small companies, where these obstacles are more likely to be mentioned.

5.2.1 Evaluation activities relating to the application of standards

Of all the practices and forms of ALT in the organizations observed by Bélanger *et al.* (2004), the types of ALT linked to operators' compliance with externally-imposed standards were virtually the only ones to be systematically evaluated. Again, this evaluation is designed more to check the application of the standards with a view to correcting behaviours that have been poorly "learned" than to introduce an evaluation that is both formative and summative. Systematic introduction of continuous feedback loops throughout the ALT process, in such a way that ALT activities can be adjusted on an ongoing basis with a view to more effective attainment of the objectives, remains a rather marginal practice. It is an impediment to the development of broad and integrated strategies of evaluation and, ultimately, to the development of ALT.

Furthermore, a relationship can be observed between evaluation practices and the sector in which the company operates. Evaluation practices in sectors whose production is regulated tend to be more systematic, albeit narrow, and to indicate deeper integration of ALT activities into the organization. This might suggest real progress in the evaluation practices of the companies studied. However, if companies in these sectors extend the development of evaluation practices as far as level 3 (Figure 5.1), they do so primarily in connection with the application of production standards. The challenge for firms in these sectors involves a now mandatory requirement that allows them to obtain and retain their distribution and export license for the continent as a whole and on a global level. Given the risk that they could lose their licences, these firms tend to develop evaluation practices from the perspective of compliance control. Further and broader feedback on ALT activities at various levels, and ultimately to the very level at which the company pursues its objectives and its strategic plan, still occurs only in quite exceptional cases.

5.2.2 Evaluation and Type of Personnel

Dunberry observes that in successful firms, "the most structured evaluation practices are designed primarily for operators: training activities for managers are evaluated in far fewer cases" (Dunberry, 2006, p. 35; transl.). Without going so far as to evaluate ALT,

some companies that are dependent on high levels of technological knowledge are beginning to follow up on the training and professional development plans for their scientists and professionals (Bélanger *et al.*, 2004): the employee's immediate superior or laboratory head is required to prepare a professional development plan for each member of his or her team linked to the employee's career plan.

5.2.3 Specific follow-up and transfer activities

What follows education and training is much more than mere evaluation. It is a question not only of emphasizing the organization of training but also the transfer of what is learned, of skills mastered, into action and the likelihood of such a transfer succeeding (Bouteiller *et al.*, 2007). The engineering of ALT implies also an active management of knowledge transfer. Follow-up allows for a more effective impact of ALT in practice, as well as for greater reproduction in the work teams of the effects of ALT activities engaged in by some of their members. Companies in Quebec that follow up on training to facilitate learning transfer seem to be few and far between.

In most of the companies studied by Bélanger *et al.* (2004), follow-up is rather limited. It is primarily a question of keeping a record of each employee's participation in various training activities. Some quality control departments use this method to check that quality training has in fact been received. For more specialized businesses in the retail sector, this may also involve regular efforts to review the training provided by suppliers, which are then extended through internal discussions so that the product can be evaluated better in light of the expectations of the specialized groups of clients. Follow-up practices are also found among professionals and scientists in firms with an intense knowledge component.

CONCLUSION

This publication, prepared on the initiative of the Canadian Council on Learning's Work and Learning Knowledge Centre, paints a general picture of adult learning and training (ALT) in Quebec firms. It also reflects recent developments, especially the major reforms made by the National Assembly in June 2007 to Quebec's ALT legislation.

It was not our aim to conduct a comparative analysis of work-related ALT in all the provinces of Canada. How could we have done so, when so little is known about the situation in most of the provinces and territories?

However, we can underscore three trends common to Quebec and the rest of Canada. First and foremost, for the last two decades, there has been substantial growth in work-related ALT across Canada, as well as in participation in adult learning as a whole (Statistics Canada, 2003). Since the factors driving the demand for ALT, such as level of qualification of the workforce and introduction of new technologies in the production of goods and services, are themselves on the rise, it can be expected that the growth in demand for learning will also continue. This trend has already been observed in other advanced industrial countries (OECD, 2003) because of the priority placed on ALT in most of those countries (European Commission, 2002).

A second general trend relates to the way in which ALT is developing in firms, namely through sectoral cooperation among employers, unions and governments. To be sure, this interplay is more intense in some sectors of the economy, but it tends to draw other sectors of the Canadian economy along with it. Third, and this is already well documented in the statistical surveys, participation in work-related ALT across the country varies with the size of the company, the job category, the level of initial training received by the labour force and the particular sector of industry.

Within that context, this report allows us to discern three specific features that characterize and highlight the reality of work-related ALT in Quebec. First of all, Quebec has closed much of the gap that existed between it and the rest of the country in 1997. The rate of participation in work-related adult learning and training in Quebec increased from 21% in 1997 to 33% in 2002, an increase of twelve percentage points (see Table A1 attached). Although Quebec is now only two percentage points behind the Canadian average, it is still, according to this indicator, the province with the lowest level of participation. A more detailed analysis shows, however, that the relative stagnation in participation by unemployed persons reduces the overall percentage and conceals the progress made in ALT in Quebec firms during this period, which is precisely when the new Quebec legislation came into force.

This so-called 1% legislation is the most significant specific feature of the situation in Quebec. It requires companies with a total payroll of \$1 million and more to spend the equivalent of 1% of this payroll on ALT for their employees, failing which they must pay this amount to a fund managed by the partners through the *Commission des partenaires du marché du travail*. While this legislation has most likely had a quantitative effect on investment and participation, especially in medium-sized companies, its structural effects are obvious:

- ▶ differentiation and recognition of the ALT function within firms,
- ▶ an innovation and research support program co-managed by the partners
- ▶ strengthening and networking of the 30 Sectoral Committees
- ▶ the establishment of 17 Regional Committees
- ▶ the modernization of the Workplace Apprenticeship Program and;
- ▶ establishment of the Workforce Skills Development and Recognition Framework.

The development of these bodies and programs has led to significant changes in coordination ('concertation') and consultation at all levels among the four clearly identified groups of actors: employers, unions, representatives of the social economy and government. Moreover, the most recent legislative reforms in 2007, which have strengthened this coordination and extended it to initiatives to recognize skills and provide new ALT joint initiatives among SMEs, through the *mutuelles de formation*, clearly indicate that all players view these aspects favourably.

The separate development of ALT funds (industrial and residential) in the construction industry (Charest et Dubeau, 2003), using the mandatory contributions of employers, should also be noted. In all these cases, the duty imposed is the result of consultation and the funds (which may not be deposited into the government's consolidated revenue government fund), are managed co-operatively.

Finally, we should note the tendency to include provisions on adult learning and training in collective agreements; also, through the increasing interplay between employers and unions on qualification and skill development issues at the sectoral level, a new trend is emerging for sectoral consultation and informal negotiation among economic partners (Charest, 2006).

The third distinctive feature of the situation in Quebec is the adoption in 2002 by Cabinet of a *Government Policy on Adult Education and Continuing Education and Training*. One of the pillars of this policy is the promotion of and emphasis on work-related learning and skill development by stimulating the learning demand, increasing the participation of the various stakeholders in defining workplace needs and adjusting the terms and conditions of ALT to the needs of the labour force. The two main government ministries that are involved, Education, and Employment and Social Solidarity, are in the process of developing the *2008–2013 Action Plan*, to follow the 2002–2007 plan.

The picture of ALT painted in this report also includes the "engineering" of ALT and continuing skill development, and the increasingly differentiated role played by ALT in the structure and policies of firms. Thus, according to the available data, planning and capturing the expression of learning demand are becoming more structured, but have still not developed evenly. This is true not only when comparing by sector of activity, type of personnel or the extent to which individual aspirations are taken into account, but also in terms of the extent to which recognition of employees' prior informal and non-formal learning takes place. The trends observed in the engineering of ALT, for example, the handling of different ALT approaches in light of the work context and skills

in question (technical versus soft skills), offer promising avenues for research and development.

Some indicators show a tendency for learning demand to expand, including demand for training of those workers who provide training. In some large firms in Quebec, the definition of an employee's skills and, consequently, training needs, no longer relates solely to his or her ability to perform a set of technical tasks and master new knowledge, but tends also to include the ability to transfer his or her knowledge and expertise to other employees and, to this end, to acquire certain so-called universal or "transversal" skills.

Where ALT evaluation practices are systematized, which is true of only one-third of firms, they tend to be limited to the first level, where participants' overall satisfaction is verified (Dunberry, 2006). To the extent, however, that ALT is becoming more closely linked to production requirements, businesses tend to monitor the impact of ALT activities in practice, that is to say, on the productive activity at the level of the operators themselves. Regular meetings of internal committees (management, customer service, quality control, health and safety, labour relations, etc.) provide opportunities that are increasingly being used for informal or occasional evaluations of ALT, as well as to diagnose future needs. The transfer of learning into productive activity and the active managerial practices required for effective transfer have recently become a focus of research (Bouteiller and Cossette, 2007).



Thus, significant progress has been made: the gap in workplace training in relation to the other provinces of Canada has almost been closed, the legislation was overhauled in 2007, province-wide consultations have been undertaken, the apprenticeship program has been updated, innovation is being promoted, research has developed and a reference framework has been introduced for the recognition of qualifications acquired on the job. Perhaps the greatest breakthrough, however, has been the sustained participation of all economic actors throughout the last 12 years and the voluntary regulation that has thus been introduced, including the 1% obligation, which was accepted by previous consensus in advance of the legislative decisions in both 1995 and in 2007.

Several challenges remain and are currently being discussed:

- ▶ The co-funding of ALT and especially the decline in the monies available in the *Fonds national de développement de la compétence de la main d'oeuvre*, formerly called the *Fonds national de développement de la formation de la main-d'œuvre*,⁶³
- ▶ Promotion of ALT in small companies with a total payroll of less than one million dollars, which have been exempt from the legislation since 2003,

⁶³ The higher the number of companies providing training, the lower the number of companies paying into the FNFMO.

- ▶ Basic (general and technical) skills education and training in the workplace,
- ▶ The removal of obstacles to participation, especially among less qualified or older segments of the workforce,
- ▶ Verifying and increasing the quality and relevance of ALT provision, which should provide participants with qualifications and be transferable,
- ▶ The development of practices to allow for the expression of the organizational and individual learning demand at the level of the firm and the sector,
- ▶ Evaluation of ALT that goes beyond merely checking participant satisfaction,
- ▶ Support in various forms, which remain to be explored, for individual job-related ALT initiatives,
- ▶ The fit between the “education” and “employment” systems, with respect not only to adult learning and training but also the recognition of employees’ prior informal and non-formal learning,
- ▶ The training and qualification of in-house trainers.

The fact that the “upstream” (assessing and expressing of learning demand) and “downstream” (evaluating results and knowledge transfer) components of ALT are so unevenly systematized in many firms may pose a dual challenge that is less evident but no less critical: the need to more effectively link training with production processes, and the need to integrate learning activities into the ongoing professional development, and more generally, the life course, of ALT participants.

Finally, in the absence of similar monographs examining the situation in the other provinces, this report highlights the urgent problem of a lack of comparative data on ALT in firms across Canada and on the various regulatory policies and practices that guide the development of ALT.

BIBLIOGRAPHY

- Béji, K., Fournier, G. and Filteau, O. (2004). *La formation professionnelle continue: Quelle ampleur pour quel rendement de la Loi 90 ?* Final report. Québec: CRIEVAT Laval.
- Bélanger, P. (1992). L'éducation des adultes et le vieillissement des populations: Tendances et enjeux. *Revue internationale de l'éducation*. Vol. 38, No. 4, 343-362.
- Bélanger, P. and Daniau, S. (forthcoming). *Les ambiguïtés de la formation continue dans un secteur d'activité à haute intensité de savoir: les entreprises biopharmaceutiques*. Montréal: UQAM.
- Bélanger, P. and Valdivielzo, S. (1997). *The emergence of learning societies: who participate in that learning?* Oxford: Pergamon Press.
- Bélanger, P., Doray, P. and Levesque, M. (2007, forthcoming). *De la pyramide à l'iceberg: Les réalités de la formation des adultes en 2002. Un regard croisé Québec-Canada*. Montréal: CIRST/CIRDEP-UQAM; Québec: MESS.
- Bélanger, P., Doray, P., Labonté, A. and Levesque, M. (2004). *Les adultes en formation: les logiques de participation*, Montréal: CIRST/CIRDEP-UQAM, Québec: MESS.
- Bélanger, P., Larivière, M. and Voyer, B. (2004). *Les pratiques et l'organisation de la formation en entreprise au Québec. Étude exploratoire*. Montréal: CIRDEP/UQAM.
- Bélanger, P., Legault, G., Beaupré, D., Voyer, B. and Trottier, M. (2005). *La formation qualifiante et transférable en milieu de travail: recension des écrits, des pratiques et des enjeux*. Montréal: UQAM.
- Bernier, C. et al. (2003). *PME. Institution d'enseignement public et formation de la main-d'œuvre*. Research report submitted to the FNMFMQ. Montreal.
- Bernier, C., Frappier, M. and Moisan, K. (2003). *Repenser l'offre de formation publique pour développer la formation de la main d'œuvre dans les PME du Québec*. CSN et CSQ.
- Bérubé, M. (2006). *The Quebec Act fostering the development of manpower training, mapping the situation after ten years of experimentation*. A lecture given at the WALL conference in Toronto, June 2006.
- Bourdon, S. (2006). "Formation, apprentissage et compétences en littératie", in F. Bernèche et B. Perron (Ed.). *Développer nos compétences en littératie: un défi porteur d'avenir*. (pp.143-171). Quebec Report regarding the International Adult Literacy and Skills Survey (IALSS), 2003. Montreal: Institut de la statistique du Québec: Santé et bien-être.
- Bouteiller, D. et Cossette, M. (2007). *Apprentissage, transfert, impacts: Une exploration des effets de la formation dans le secteur du commerce de détail*. Montréal: HEC.
- Carré, P. (1992). *L'autoformation dans la formation professionnelle*. Paris: French documentation.
- Centre francophone d'information des organisation (2006). *NetPME 2006: Utilisation des TI par les entreprises québécoises. Faits saillants*. Montreal: CEFRIQ.
- Cervero, R. M. (2001). "Continuing professional education in transition, 1981-2000", *International Journal of Lifelong Education*, vol. 20, n° 1-2, p. 16-30.
- Charest, J. (2002). *Évaluation de la politique d'intervention sectorielle d'Emploi-Québec. 1995-2001*. Québec: MESS.
- Charest, J. (2003). *Partenariats sectoriels en matière de mains-d'œuvre au Québec – Une évaluation positive*. *Gazette du travail*, vol. 7, no 3.

- Charest, J. (2006). *Contribution des normes du travail à une stratégie relative au capital humain*. Research Report submitted to the Federal Labour Standards Review Commission . Montreal: Université de Montréal / École de Relations industrielles.
- Charest, J. (2007a). "La formation de la main-d'oeuvre", in G. Hébert, R. Bourque, A. Gilles, M. Grant, P. Jalette, G. Trudeau et G. Vallée, dir. *La convention collective au Québec*. (pp. 231-248). Boucherville: G. Morin éd.
- Charest, J. (2007b, forthcoming). "Impacts of a Law fostering training development: Lessons from Québec's experience", *Administration publique du Canada – Canadian public administration*, vol. 50, no 3.
- Charest, J. et Dubeau, C. (2003). Organisation du système de formation continue dans l'industrie de la construction au Québec: Partenariat et mutualisation. *Gazette du Travail*, Vol. 6, No. 3, 62-74.
- Chatigny, C. et Vézina, N. (2004). Polyvalence et formation continue: Des inséparables à réconcilier pour la santé la sécurité, *Pistes*, Vol. 6, No. 1.
- Cheetham, G. and Chivers, G. (1996). "Towards a holistic model of professional competence", *Journal of European Industrial Training*, Vol. 20, No. 5, 20-30.
- Commission des partenaires du marché du travail (2006). *Mémoire sur le rapport quinquennal de mise en œuvre de la Loi favorisant le développement de la formation de la main-d'œuvre*. Brief submitted to the Commission de l'économie et du travail. Québec: CPMT.
- Commission des partenaires du marché du travail (2007). "Compagnonnage et recours aux TIC dans la formalisation et la transmission des savoirs tacites", *Bulletin PSRA*, No. 2. www.cpmpt.gouv.qc.ca/bulletins/psra/2007/n2/index.htm
- Conseil interprofessionnel du Québec (2000). *La formation continue et l'amélioration de la compétence*. Document published following from the conference of the Forum de la formation du C.I.Q. Montréal.
- Conseil supérieur de l'éducation (2000). *La reconnaissance des acquis, une responsabilité politique et sociale*, Québec: CSE.
- Direction du FNFMO et CPMT (2006). *Rapport d'activités 2005-2006*. Québec: MESS.
- Direction du Fonds national de formation de la main-d'œuvre (2005). *Rapport quinquennal sur la mise en œuvre de la Loi favorisant le développement de la formation de la main-d'œuvre 2000-2005*. Québec: Emploi-Québec.
- Direction du Fonds national de formation de la main-d'œuvre (2006). *Bilan quantitatif sur la participation des employeurs à la Loi favorisant le développement de la formation de la main-d'œuvre en vertu de l'article 3 – année civile 2005*. Québec: CPMT.
- Direction générale de l'apprentissage et de la formation de la main-d'œuvre (2000). *Rapport quinquennal sur la mise en œuvre de la Loi favorisant le développement de la formation de la main-d'œuvre 1995-2000*. Québec: Emploi-Québec.
- Doray, P. (1991). "Les stratégies des entreprises québécoises en matière de formation", *Relations industrielles*, Vol. 46, No. 2, 329-356.
- Doray, P. and Bélanger, P. (2006). *Mémoire sur le rapport quinquennal de mise en œuvre de la Loi favorisant le développement de la formation de la main-d'œuvre*. Brief submitted to the Commission de l'économie et du travail. Montréal: CIRST et CIRDEP, UQAM.
- Dunberry, A. (2006). *Analyse des pratiques d'évaluation de la formation et de son rendement dans des entreprises performantes*. UQAM/CIRDEP.
- Emploi Québec (2004). *Le marché du travail au Québec, Perspectives professionnelles 2003-2007*, Québec: Emploi Québec.

- European Commission (2000). *Memorandum on life-long learning in a Europe of knowledge*, Brussels: DG Education and Culture.
- European Commission (2002). *Memorandum on life-long education*. Brussels: European Commission.
- Fonds national de formation de la main-d'œuvre (1997 à 2005). *Rapport d'activités 1996-1997 à 2003-2004*. Gouvernement du Québec.
- Foucher, R. (2000). *L'autoformation reliée au travail*. Montréal: Éditions nouvelles AMS.
- Garavan, T. N., Hogan, C. and Cahir-O'Donnell, A. (2003). *Making training and development work: a best practice guide*, Dublin: Oak Tree Press.
- Groupe de travail de la CPMT sur l'apprentissage en milieu de travail (2006). *Cadre général de développement et de reconnaissance des compétences: Bilans et perspectives*. www.cpmt.gouv.qc.ca/publications/pdf/ADMIN_Bilan_perspective_Cadre.pdf
- Houde, R. (1995). *Des mentors pour la relève*. Montréal: Éditions du Méridien.
- International Labour Organisation (2001). *A Society Without Exclusion For an Aging Population*. Geneva: ILO.
- Kirkpatrick, D. L. (1998). *Evaluating training programs: the four levels*. San Francisco, CA: Berrett-Koehler.
- Labonté, A., Doray, P., Bélanger, P. and Motte, A. (2004). *Une analyse comparative Québec-Canada de la participation à la formation des adultes. Note 2*. Montréal: CIRST/CIRDEP-UQAM, Québec: MESS.
- Lapierre, G., Labonté, A. et Tétreault, H. (2005). *L'évaluation formative de la Loi favorisant le développement de la formation de la main-d'œuvre (Loi du 1%)*. Report on a survey of employees. Direction de l'évaluation, Direction de la recherche, de l'évaluation et de la statistique et Direction générale des politiques. Government of Quebec.
- Lave, J. and Wenger, E. (1991). *Situated learning. Legitimate peripheral participation*. Cambridge: University Press.
- Lesemann, F. (2005, under the direction of). *La formalisation des pratiques de formation dans les PME manufacturières québécoises*. Groupe de recherche sur les transformations du travail, des âges et des politiques sociales. INRS Urbanisation, Culture et Société.
- Livingstone, D.W. (1999). Exploring the icebergs of adult learning: findings of the first Canadian survey of informal learning practices, *Canadian Journal for the Study of Adult Education*, Vol. 13, No. 2, 49-72.
- Livingstone, D.W. (2000). *The Education-Jobs Gap: Underemployment or Economic Democracy*. Toronto: Garamond Press.
- Livingstone, D.W. (2003). *Mapping the Iceberg*. Toronto: NALL Working Paper No. 54. <http://www.oise.utoronto.ca/depts/sese/cserv/nall/ress/54davidlivingstone.pdf>
- Marchand, L., Lauzon, N. et Pérès, L. (2007). *Formalisation et transmission des savoirs tacites des travailleurs d'expérience et formation par les TIC. Synthèse, défis et recommandations*. Montreal: CPMT.
- Meignant, A. (1991). *Manager la formation*. Paris: Éditions Liaison.
- Ministère de l'Éducation, du Loisir et du Sport (2005). *Plan stratégique 2005-2008*. Québec: MELS.
- Ministère de l'Immigration et des Communautés culturelles (2005). *Fiche thématique sur le Programme d'aide à l'intégration des immigrants et des minorités visibles en emploi (PRIIME)*. Gouvernement du Québec: MICC.

- Murphy, C., Cross, C. and McGuire, D. (2006). "The motivation of nurses to participate in continuing professional education in Ireland", *Journal of European Industrial Training*, Vol. 30, No. 5, 365-384.
- OECD (2003). *Au-delà du discours: Politiques et pratiques de formation des adultes*. Paris: OECD.
- OECD and CERI (2006). *Learning Sciences and Brain Research*. Paris: OECD and Copenhagen: CERI.
- Peters, V. (2004). *Working and Training: First Results of the 2003 Adult Education and Training Survey*, Ottawa: Statistics Canada, (81-595-MIF2004015).
- Roscoe, J. (2002). "Continuing professional development in higher education", *Human Resource Development International*, Vol. 5, No. 1, 3-9.
- Sirois, N. (1995) *L'autoformation comme stratégie de structuration des compétences professionnelles: une étude de cas dans l'industrie pharmaceutique*. Montreal: HEC, Master's thesis.
- Statistics Canada (2003). *Adult Education and Training Survey: User Guide 2003*. Ottawa: Statistics Canada.
- Statistics Canada and OECD (2005). *Learning A Living: First Results of the Adult Literacy and Life Skills Survey*. Ottawa: Statistics Canada and Paris: OECD.
- Teiger, C. and Montreuil, S. (1996). The Foundations and Contributions of Ergonomics Work Analysis in Training Programmes. *Safety Science*. Vol. 23, No. 3, 81-95.
- Tremblay, D.-G. et Doray, P. (2000) *Vers de nouveaux modes de formation professionnelle? Rôles des acteurs et des collaborations*, Sainte Foy: PUQ.
- Tremblay, D.-G., Doray, P. and Landry, C. (2000). "Les comités sectoriels du Québec: un signe de rapprochement économie-éducation en matière de formation professionnelle?" in A. Alcouffe, B. Fourcade, J-M. Plassard et G. Tahar (Dir.), *Efficacité versus équité en économie sociale*, (pp. 63-74), Paris: L'Harmattan, Tome 2.
- Turcotte, J., Léonard, A. and Montmarquette, C. (2003). *Changing Workplace Series - New Evidence on the Determinants of Training in Canadian Business Locations*, Ottawa: Department of Industry.
- Voyer, B. (2007). *Développement des compétences et formation continue des professionnels en situation d'intermittence en emploi: à la recherche d'un encouragement étatique*. Paper delivered to the International Conference of the CRIMT, May 2007, Montréal. www.crimt.org
- WALL. (2004). National Survey of Learning and Work: Working Papers and Resources. <http://www.wallnetwork.ca/resources/workingpapers.htm>

APPENDIX

Table A.1
Rate of structured work-related ALT,
in Canada and Quebec in 1997 and 2002
(employed population 25 years of age and older)

	1997	2002
Quebec	21 ^a	33 ^a
Canada	29 ^a	35 ^a

Source: Statistics Canada (2003), taken from Bélanger, Doray
and Levesque (2007).

^a difference 1997-2002 significant to 0.01