



## **FORMAL COOPERATION MECHANISMS, TECHNOLOGICAL CHANGES, AND VOCATIONAL TRAINING**

**Amélie Bernier**, Assistant professor, Industrial Relations, École des sciences de l'administration, TÉLUQ (Distance learning University), Université du Québec, 100 Sherbrooke Street West, Montreal, Quebec, H2X 3P2 [Amelie.Bernier@teluq.ca](mailto:Amelie.Bernier@teluq.ca)

**Bibiana Pulido**, doctoral student in industrial relations at Université de Montréal and the Interuniversity Research Centre on Globalization and Work (CRIMT), Université de Montréal [Bibiana.Pulido@umontreal.ca](mailto:Bibiana.Pulido@umontreal.ca)

### **Introduction**

Until recently, cooperation regarding workplace training was not a widely discussed topic amongst industrial relations professionals and researchers. Yet this issue has become essential, considering that training takes place whenever changes impact a workforce's skill levels or create new market requirements. Among the disruptions affecting skill requirements and skill levels, technological and organizational changes may explain the possible and measurable gaps between the training offered and the demand for new skills and knowledge within companies. Additionally, it seems that technological changes are the main driving force behind new economic and social dynamics (Depret & Hamdouch, 2007) and constitute a response to the numerous pressures of the world economy (Laflamme & Vallée, 1987). Because of these factors (e.g. new technologies, globalization, the knowledge-based economy, and demographic trends), transforming work processes within organizations calls for an adaptable and high-quality workforce, but also, in our opinion, requires collaboration between the various actors. Indeed, technological changes are mentioned in this article mainly to address the possible repercussions they may have within workplaces, representing either a challenge or an advantage to be taken into account when preparing new agreements and implementing new mechanisms specific to skills development.

Apart from a certain number of studies dealing with labour-management cooperation (Bettache, 2010; Dufour, 2003; Tremblay & Roland, 2003) or with education-work cooperation (Hardy, 2003), very few empirical studies have been carried out in Quebec about labour-management cooperation regarding skills development (Héon, 2011; D'Ortun, 2011). Despite the value of studies by Héon *et al* on cooperation in the trucking industry, and D'Ortun's work on self-education, the scope of this research

is very limited, in particular given the number of cases studied, but also with respect to the explanatory effect of formal tools and mechanisms on cooperation between the actors involved. Lastly, as only very few specific statistics exist regarding this matter, we cannot paint a precise picture of the situation.

Having said that, our article will enable us: (1) to show whether the presence of formal mechanisms (such as committees, agreements or collective agreement clauses) constitutes an explanatory factor capable of stimulating a successful cooperative process regarding vocational training, especially given the limited volume of literature on the topic, and (2) to shed light on the impact technological changes may have on the cooperative dynamic between actors. To achieve this, our article will be divided as follows: after addressing the validity of considering formal cooperation mechanisms, technological changes, and vocational training, we will present our methodology and discuss our results. We will also address the limitations of our research.

### **Cooperation or consultation?**

This research is built around the notion of cooperation/consultation, particularly as it relates to vocational training. As suggested by Dufour (2003) and Laforest (1999), one can define cooperation as a *voluntary process* involving collaboration between at least two actors—in this specific case, at least one representative of the employer and one representative of the employees—in order to reach consensus on a given subject. The consensus may cover the entire subject or only a part of it. This cooperative process is also a decision-making process, which reflects a certain degree of power for both actors as they construct a set of rules in a specific context. The literature suggests that partnerships where stakeholders work together to achieve a common goal have variable and potentially advantageous consequences for unions (e.g. Eaton and Rubinstein, 2006; Roche and Geary, 2006; Rubinstein, 2001). This definition is also supported by Lamoureux (1996), who specifies that cooperation is a process based on negotiation that aims to create compromise between the parties involved. Lamoureux highlights three elements that we consider to be particularly interesting, as they allow for a simple characterization of what we mean by cooperation, i.e. a voluntary decision-making process. In our opinion, defining cooperation as a *process* refers to the formal notion of a *system*, as it is generally accepted in industrial relations: i.e. made up of a context, various actors, and the production of rules. A *voluntary* process specifies that “attendance may not be imposed by any authority whatsoever” (Lamoureux, 1996: 4). Finally, cooperation as a *decision-making* process implies that an organization's actors have a certain power over the definition and establishment of rules within a specific context. Moreover, we must take a broad view of this definition in order to avoid limiting its interpretation to a strictly formal process, which could refer only to rules negotiated by the actors. Indeed, we believe that the defining of rules (or reaching agreements) may emerge from informal discussions. For this reason in particular, we have used the notion

of *cooperation/consultation* throughout this research project. We will deliberately not distinguish between the concept of cooperation and its related concepts, such as consultation and partnership, as suggested by Lamoureux (1996), in order to respond to concerns expressed by labour market partners and participants targeted in our investigation.

### **Technological changes, collective relationships, and vocational training**

New technologies are changing the face of organizations, work processes, and the nature of work; they prompt us to redefine the relationship between actors, the competition dynamics among companies, and how business is carried out, and they also suggest a need to plan for and review workforce training (Gagnon & Landry, 1989).

As such, results obtained by Gagnon, Laurendeau and Pinard (1988, following a study carried out in four unionized Quebec manufacturing plants) suggest that technological changes can redefine the organization of work. Notably, they can redefine social and collective relationships, as well as a worker's tasks. Technological changes seem to intensify the production aspect of work, but do not necessarily lead to a formal deskilling of workers.

More recent research has attempted to establish a relationship between technological changes and vocational training. Although the question of possible links between technological changes (as well as innovation) and training has been studied in several research projects in Canada starting in the 1990s<sup>1</sup>, the relationship between these variables is far from unequivocal. In this regard, a study conducted by Zamora (2006) shows that changes regarding the quality and decentralization of responsibilities have a greater effect on workers' desires to acquire new skills than do technological changes. These results thus suggest that training and organizational changes may constitute complementary factors, which is not necessarily the case with technological changes. Hence, it seems that adopting innovative organizational devices is accompanied by a progressive increase in the workers' demand for training.

Technological changes also have other effects on how formalized are collaborative collective relationships. For example, a study conducted by Bernier et al (1996) illustrates that crises and prolonged periods of economic hardship prompt interested parties to create cooperative mechanisms. Conversely, Bettache's (2010) results show that actors consider technological changes as an obstacle to the establishment of reciprocal arrangements or to the formalization of a joint decision-making process.

In addition, studies by Bernier et al (1996) and Bettache (2010) demonstrate that through their presence on decision-making committees, labour unions have been able to take part in issues heretofore handled exclusively by higher management, such as job evaluations, work organization, and the content of training programs. Yet unions are still

---

<sup>1</sup> For a review of Canadian studies, see Baldwin (1999), who reviewed several works establishing a positive relationship between training and innovation.

not very involved in strategic decision-making. These results support previous observations by Laflamme and Vallée (1987, based on a study of collective agreement clauses), showing that the existence of joint committees on vocational training does not necessarily go hand in hand with an overall focus on skills development in labour relations. Although the composition of a joint committee is rooted in the collective agreement, this does not ensure formal collaboration nor a division of decision-making power amongst the parties with respect to vocational training. In fact, as pointed out by Bettache (2010), the presence of joint committees does not necessarily guarantee a favourable climate for cooperation, but these committees remain a privileged environment for dialogue.

In short, these studies highlight that ambiguity subsists regarding the possible relationships between technological changes, formal cooperation devices, and vocational training. This literature demonstrates that although technological changes invite both parties to cooperate, labour unions have rather limited power pertaining to training and skills development. In this regard, management remains the most influential decision-making actor.

### **The strategic approach to better understanding cooperation regarding training**

In the approach developed by Crozier and Friedberg (1977) and by Bernoux (1985), technological changes are the result of a reaction from actors who, having integrated environmental pressures, formulate a response to them—which, in turn, affords them a certain power within the organization. This strategic approach is thus interesting in the context of our research, as it underscores the importance of formal rules (regulations and collective agreements) but also grants importance to informal rules (procedural or common rules) that are applied in daily practices and that result from arrangements, compromises, and collaboration concerning new methods.

### **Methodology and population studied**

The analysis presented here is based on a statistical survey of 300 unionized manufacturing companies and 75 non-unionized companies of under 500 employees in Quebec, and on a study of 115 collective agreements from four manufacturing sectors: textile, chemical products manufacturing, retail, and metallurgy.

For the statistical survey, data collection was carried out using a telephone questionnaire built around the following themes: the formal environment of cooperation and training; the structure of meetings between actors; advantages and obstacles to cooperation regarding vocational training; and workplace training and the presence of innovations. The base sample consisted of 9967 respondents; the effective sample amounted to 3728 respondents. Of this total, we had 636 refusals, 3353 telephone interviews not completed, 35 incomplete interviews, for a response rate of 65.3%. The final sample included 375 firms of fewer than 500 employees. Respondents in this

statistical survey are mostly business managers, HR directors or business owners: 63.9% of them occupy decision-making positions within the organization. Within the sample, 39.8% of firms have under 50 employees, whereas 60.3% have 50 employees or more. Among the 300 unionized companies in the sample, the labour centre with the largest group of workers in ascending order is the FTQ<sup>2</sup> (Quebec Federation of Labour) with 30.2%, followed by the CSN<sup>3</sup> (Confederation of National Trade Unions) with 21.7%, the CSD<sup>4</sup> (Congress of Democratic Trade Unions) with 9.2% and the TUAC<sup>5</sup> with 6.8%. Finally, the main business sectors represented in this survey are manufacturing (22.1%), construction (17.3%) and retail industry (11.7%).

Regarding our study of collective agreements, our goal was to observe the formal structures for skills development and skills recognition included in collective agreement clauses, as well as the presence of joint committees regarding training in five business sectors (textile, chemical, retail, hotel and restaurant industry, and metallurgy). This study focused on the analysis of collective agreements in establishments with under 500 employees. The majority of collective agreements are from the two major labour bodies in Quebec, the FTQ and the CSN.

### **Research results**

The statistical analysis and review of collective agreements presented in this section (relating to the presence of cooperation devices regarding workforce training) are in a way the analysis of the union (or management) actor's power to implement formal mechanisms that provide a framework for his partner's or his adversary's actions<sup>6</sup>. In other words, by showing the presence and frequency of formal mechanisms (devices, clauses, letters of agreement) regarding cooperation and vocational training, it is possible, in our view, to paint a picture of labour relations and cooperation regarding skills development.

#### *Presence of formal cooperation mechanisms*

One of the purposes of this research is to show whether the presence of formal mechanisms—such as committees, agreements, collective agreement clauses, or formal meetings—is indeed a factor that may promote cooperation regarding vocational training. The results of the statistical study demonstrate that the collective agreements of approximately 7 out of 10 unionized companies (72.5%) have devices (a clause, letter of

---

<sup>2</sup> Fédération des travailleurs et travailleuses du Québec

<sup>3</sup> Confédération des syndicats nationaux

<sup>4</sup> Centrale des syndicats démocratiques

<sup>5</sup> Trade Union Advisory Committee (Canada)

<sup>6</sup> Regarding this matter, Gagnon and Landry (1989) present the actors' power as follows: "(...) they control areas of uncertainty, they have a margin of freedom, which affords them a corresponding level of power. Therefore, each player has a certain power over the others, in keeping with the pertinence of the source of uncertainty they control before them."

agreement, or written agreement) related to workforce training in the workplace, whereas 27.5% do not.

As for formal skills development mechanisms, the responses are relatively close: 47.4% of responding employers (n=289) indicate that their collective agreements provide for this type of device, whereas 52.6% of collective agreements do not.

Concerning formal mechanisms for cooperation, collaboration, and employee skills development cooperation, 82.9% of collective agreements from responding establishments (n=129) include cooperation/consultation-related mechanisms, whereas 17.1% of agreements do not include them.

Another mechanism identified as an explanatory factor for successful cooperation (Bettache, 2010) is the presence of a joint manager-employee committee. As seen in the existing literature, the presence of such committees does not necessarily have an effect on the success of a cooperative process, but the dynamics they generate—as well as the topics discussed, the frequency of meetings, and member involvement—do. Hence, our results show that out of a sample of 375 responding firms, 57.1% do not have a joint manager-employee committee concerned with cooperation rather than negotiation, whereas 42.9% do. According to the respondents whose companies do have a joint manager-employee committee, decisions made by the committee on matters regarding vocational training have enabled companies to improve workers productivity (92.2%), to improve the quality of training (89.9%) and the use of new technologies (87.3%), and to improve the work environment (85.3%), retain qualified employees, (84.8%) and promote intergenerational exchange (84.4%).

Finally, our results demonstrate that when asked to express what workplace cooperation brings to mind, our respondents first mentioned promoting problem-solving (99.4%), then information sharing (98.3% of cases), and lastly, the creation of partnerships (93.5%).

#### *Presence of formal mechanisms: Differences based on company size and presence of labour unions?*

When analyzing our sample by company size, we note that formal mechanisms for a cooperative process regarding training seem to be present more as the number of employees increases: in 35.8% of cases for organizations with 50 to 99 employees, in 44.1% of cases for companies with 100 to 249 employees, and in 54.8% of cases for companies with 250 to 499 employees. Our results also show that companies with 99 employees or less have a greater tendency to adopt a structured training plan (62.2%) than do larger companies (37.8%).

Additionally, our results suggest that the presence of formal mechanisms related to vocational training in the sample of unionized companies in Quebec differs from what we observe in the sample of non-unionized companies. For example, within the group of unionized companies in our sample, 54.2% do not have a manager-employee committee

for cooperation, compared to 68.9% of non-unionized companies. Moreover, in certain unionized workplaces, it is possible to carefully review collective agreement clauses and negotiated agreements pertaining to a company's planning for training, either through the example of training clauses, joint committee training clauses, or clauses related to technological changes. The analysis of collective agreements enables us to note that the size of the bargaining unit<sup>7</sup> does not seem to indicate a greater presence of formal clauses for cooperation regarding training. We also observe that the presence of training committees in bargaining units of 49 employees or less is generally associated with a framework agreement. The presence of training committees may thus reflect the importance collective actors grant to a formal structure for skills development and skills recognition.

#### *Technological changes: From a real challenge to a successful collaboration?*

These results are even more interesting when one can associate them with an organization's training offer. Hence concerning the application of new technologies, we can also ask whether these are considered an obstacle to cooperation regarding vocational training. Results from the statistical survey show that in 38.1% of cases, technological changes are considered to be the main difficulty in achieving a successful cooperative effort regarding vocational training. This finding is supported by the literature on this topic, namely in studies by Bettache (2010) and Roy et al (2005). The analysis of collective agreements also reveals that all of the industries considered have clauses in their collective agreements about technological changes as they relate to vocational training. The presence of this type of clause may reflect concern on the part of employers or unions regarding the ability to face such changes, which motivates them to adopt plans for updating employees' knowledge and know-how.

#### **Discussion of results**

This article has enabled us to paint a portrait of formal cooperation mechanisms regarding vocational training. Although the literature on the specific issue of collaboration relating to training is limited, the fact remains that our results are of interest, particularly regarding the diverse types of regulations relating to training. Our results also lead us to reflect on the idea of possible links between union participation and the establishment of new forms of regulation regarding vocational and professional training.

#### *Technological changes and cooperation regarding vocational training*

As our results have shown, the cooperative dynamic regarding training does not seem to be affected by technological changes, as no significant differences are noted

---

<sup>7</sup> Distinct group of employees, not necessarily including all employees within an organization but those having shared interests relating to work.

between companies experiencing difficulties due to technological changes and companies who do not take these into consideration. However, we note that a greater number of companies who experience difficulties regarding technological changes adopt a structured training plan (70.5%) and that half of these companies (50.4%) have a manager-employee committee handling cooperation. Thus, although technological changes may alter collaboration between actors, the actors nevertheless establish formal devices to oversee training-related decisions.

*Union presence: A structuring effect on cooperation, but...*

Vocational training involves characteristics related to justice and equity that traditionally fall under the union's responsibilities. Unions may encourage participatory practices linked to skills development within companies, through workforce retention or through improving relations between parties by promoting communication (Bettache, 2010; Jalette & Bergeron, 2002).

Our results show that a higher number of unionized companies form a committee comprising employee and employer representatives (45.8%) to discuss vocational training issues, as compared to non-unionized companies (31.1%). Moreover, it is interesting to note that although many decisions made by the joint committee seem to better address economic and performance-related preoccupations (productivity, quality, and technology), it is not possible to establish a relationship between such preoccupations and the retention of qualified staff.

Although the presence of committees dedicated to the cooperative process has been formally identified as a mechanism likely to contribute to the consolidation of labour-management cooperation (Bettache, 2010), our results do not allow us to conclude that this presence has a positive effect on the cooperative regarding vocational training between the actors. Moreover, our results connect to research carried out by Harrisson and Laplante (1994) showing that such committees are indeed consultation forums where parties may define alternatives, exchange information, and negotiate mutually profitable decisions towards the creation of a partnership.

In fact, our results show that a union's presence has a structuring effect on relations between actors regarding workforce training, but we may not consider this an explanatory effect of the union's presence on a broader collaboration between actors regarding training. In a sense, our results support those of Bernier (2010), which show that union presence and the perception of a good work environment reflect a situation in which employer and employees have shared interests towards the pursuit of like goals.

*Implementing a new relationship method*

Our results lead us to reflect on the context in which cooperation takes place. Survey results and a review of collective agreements have shown that new forms of regulations (meetings, discussions, partnerships) may develop within workplaces in order

to initiate structured dialogue among actors. For example, our results illustrate that the presence of committees enables groups to improve the overall quality of life at work and the well-being of employees by finding new ways to work together; especially since these committees provide an occasion for sharing common issues. Our results also demonstrate that collaboration regarding skills development and training does not only rely on harmonious relations between the parties involved; in addition, the involvement of management—particularly the importance it gives to skills development—is essential if such projects are to succeed. In a way, these observations also support previous studies by Laflamme and Vallée (1987) showing that a concrete action system for workplace relations exists alongside institutional and legal regulations, particularly where a certain union control may exist regarding change. These regulation methods combine with collective bargaining, particularly with respect to the organization of workplace changes.

### **Limitations of the research**

The conclusions presented in our article enable us to highlight certain limitations and to better delineate the results obtained. One limitation regards the definition of cooperation as such. As we have explained, in order to take into account the realities of the workplace and its actors, we have chosen to apply a broader, less restrictive notion of cooperation for discussing the matter of vocational training. Another limitation concerns the measurement scales applied to certain variables, particularly regarding respondents' perception of their cooperative practices or their understanding of the notion of cooperation, despite our best efforts to define key concepts at the beginning of each of the questionnaire's sections. Another moderating factor in our research is the effect of time. The results presented herein only paint a limited portrait of professional relations regarding training; repeating the questionnaire over a longer period would enable us to refine our understanding of workplace relations as they relate to skills development. Yet another limitation pertains to our analysis of collective agreements, which is rather restricted since it encompasses only five industrial sectors over a short period of time. It would thus be interesting to broaden the scope of our analysis to include other industrial sectors over a longer period of time. The study of collective agreements does not enable us to know exactly how cooperation occurs within organizations. As indicated by Bernoux (1985), it is important to consider informal relations between actors within an organization. In this regard, it would also be interesting to carry out further studies within companies that have joint committee clauses in order to observe how cooperation actually occurs. However, as previously mentioned, the presence of unions is not necessarily an explanatory factor of greater collaboration between actors regarding training. It would, therefore, be incorrect to limit our study to unionized organizations.

### **References**

Bélanger, P.R. and Lévesque, B. (1992). *Éléments théoriques pour une sociologie de l'entreprise : des classiques aux « néo-classiques »*. Cahiers de recherche sociologique, no 18-19.

Bernier, A. (2010). *L'étude des déterminants et des effets de la formation au sein des entreprises canadiennes : au-delà de la productivité*. Thesis submitted to the Faculty of Graduate and Postdoctoral studies in partial fulfillment of the requirements of the degree of Philosophiae Doctor (Ph.D.), Université de Montréal, École de relations industrielles, 451 pages.

Bernier, C., Bilodeau, M. and Grenier, J.-N. (1996). « Les comités paritaires de formation professionnelle au Québec : vers une plus grande coopération dans les relations du travail ? » *Relations industrielles/Industrial Relations*, 51 (4).

Bernoux, P. (1985). *La sociologie des organisations*. Paris: Seuil.

Bettache, M. (2010). *La concertation patronale-syndicale au Québec : consultation ou décision conjointe ? Des différences de perception et retombées sur la mobilisation des employés*. Revue multidisciplinaire sur l'emploi, le syndicalisme et le travail, vol 5, no 1.

Crozier, M. and Friedberg, E. (1977) *L'acteur et le système*. Paris: Seuil.

Depret, M.-H. and Hamdouch, A. (2007). *Les changements technologiques, logiques institutionnelles et dynamiques industrielles. Esquisse d'une approche co-évolutive appliquée à l'industrie pharmaceutique et aux biotechnologies*. Innovations, vol 1, no 25.

D'Ortun, F. (2011). *Les compétences acquises par l'autoformation : relevé des pratiques et des tractations travailleurs-employeurs en vue de leur reconnaissance*. Research report submitted to the Applied Research Grant Program (PRSA) of the Commission des partenaires du marché du travail, Québec, 283 pages.

Dufour, R. (2003). *Les facteurs de succès des processus de concertation : le cas du Conseil consultatif du travail et de la main-d'œuvre*. Master's thesis submitted to the Faculty of Graduate studies in partial fulfillment of the requirements of the degree of Master, Industrial relations. École de relations industrielles. Faculté des arts et des sciences.

Eaton, A. E. and Rubinstein, S.A. (2006). "Tracking Local Unions Involved in Managerial Decision Making", *Labour Studies Journal*, 31 (6): 1-29.

Gagnon, M.-J., Laurendeau, F. and Pinard, R. (1988). *Les changements technologiques : au-delà de l'emploi, le travail au quotidien*. Sociologie et sociétés, vol 20, no 1.

Gagnon, Y.-C. and Landry, M. (1989). « Les changements technologiques : Une stratégie d'étude exploratoire ». *Relations industrielles/Industrial Relations*, 44 (2).

Harrison, D. and Laplante, N. (1994). « Confiance, coopération et partenariat : un processus de transformation dans l'entreprise québécoise ». *Relations industrielles/Industrial Relations*, 49 (4), 696-729.

Héon, L., Goyer, L. and Blanchet, J. (2011). *Approches de concertation et pratiques soutenant la reconnaissance des compétences et le développement de la qualification: analyse du secteur routier*. Research report submitted to the Applied Research Grant Program (PRSA) of the Commission des partenaires du marché du travail, Québec, CRIEVAT, 253 p.

Jalette, P. and Bergeron, Jean-Guy (2002). « L'impact des relations industrielles sur la performance organisationnelle ». *Relations industrielles/Industrial Relations*, 57 (3), 542–566.

Laflamme, G. and Vallée, G. (1987). « Changements technologiques et modes régulateurs des relations de travail ». *Relations industrielles/Industrial Relations*, 42 (4).

Laforest, R. (1999). *L'État, les groupes et la consultation publique : le cas de la réforme de la sécurité sociale en 1994*. Master's thesis, Political Science, Université de Montréal.

Lamoureux, J. (1996). « La concertation : perspectives théoriques sous l'angle du néocorporatisme », Cahiers du CRISES (UQAM), no 9607 Montréal.

Quinet, F. (1965). « Les transformations technologiques et conventions collectives de travail ». *Relations industrielles/Industrial Relations*, 20 (1).

Roche, W. K., and Geary, J. (2006). *Partnership at Work: The Quest for Radical Organizational Change*. London: Routledge.

Roy, M. et al (2005). « La transformation du rôle des intervenants syndicaux vivant un partenariat syndicale patronal », Research Report, Labour-Management Partnerships Program, Human Resources and Skills Development Canada, Centre d'étude en organisation du travail, Faculté d'administration, Université Sherbrooke.

Rubinstein, S.A. (2001). "A Different Kind of Union: Balancing Co-Management and Representation", *Industrial Relations*, 40 (April): 163-203.

Tremblay, D-G and Rolland, D. (2003). *Concertation : Modèles et perspectives*. Research Note 2003-24 of the Canada Research Chair on the Socio-Organizational Challenges and the Knowledge Economy. Télé-université. Université du Québec.

Zamora, P. (2006). *Changements organisationnels, technologiques et recours à la formation dans les entreprises industrielles*. Revue économique, vol 57, no. 6.

