

UNION INFLUENCE ON WORKER EDUCATION AND TRAINING IN CANADA IN TOUGH TIMES

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BACKGROUND

In spite of much talk about a “knowledge-based economy” and “learning organizations”, little research has addressed the actual extent of worker education and training activities in current paid workplaces, and even less has considered the extent to which union status influences participation in such learning activities (Green, 1999; Ball, 2003). There is extensive empirical research on the positive impact that unionization has on different aspects of industrial relations, much of it focused on wage differences (Card, 1996; Fang and Verma, 2002), productivity (Gregg, Machin and Metcalf, 1993), and reducing turnover (Elias, 1994).

But the little empirical research on unionization and education and training has generated inconclusive results using diverse approaches (Aidt and Tzannatos, 2002). Several Canadian (Kapsalis, 1996; Doray, Belanger, Motte and Labonte, 2003) and foreign (Green, 1993; Green, Machin and Wilkinson, 1999; Frazis, Herz and Horrigan, 1995; Orrje, 2000) studies show positive relations between unionization and educational participation. In contrast, a number of other Canadian (Gilbert, 2003; Green and Lemieux, 2001; Hui and Smith, 2001; Hum and Simpson, 2001) and foreign studies (Mincer, 1981; Frazis, Gittleman and Joyce, 1998) find lack of union impact or negative impact on the level of participation in education and training.

This study aims to examine closely three aspects of this relation: (1) differences in educational attainment and job experience (tenure) between unionized and non-unionized workers; (2) incidence of participation for unionized and non-unionized employees in different forms of formal and informal learning and (3) how socio-demographic and organizational characteristics effect unionized and non-unionized workers’ participation in education and training. We intend to use a more standardized sample and wider array of comparable indicators on workers’ participation in formal education and

informal learning than most previously published Canadian surveys on worker education and training.

It seems self-evident that, other things being equal, unionized workers will be more likely to participate in education and training programs and more likely to be supported by their employers in these activities, as a consequence of their greater collective bargaining power. So, why have previous research findings been so inconsistent?

McIntosh (1999) and Green, Machin and Wilkinson (1999) analyze recent international and British studies on union influence on education to show that the samples selected in many of these studies have not been designed to examine the impact that unionization has on workers' education and training. Years earlier, Mincer (1981) had noted that research on unions and training used a variety of approaches and variables that were not comparable. Recent Canadian studies that have found a negative or inconsistent union impact on worker participation in education and training (e.g. Green and Lemieux, 2001; Hum and Simpson, 2001) have tended to include in their samples many more respondents than the Labour Force Survey (LFS) methodology recognizes as eligible for questions on unionization, including in some cases the self-employed, in others managerial personnel. Conversely, another U.S. study arbitrarily excludes small companies that often have low union density and low training participation rates (Frazis, Gittleman and Joyce, 1998). Such studies provide limited opportunities for generalizations on unions' impact on union-eligible workers' participation and training. Some studies have also dismissed consideration of non-employment-related courses as merely "hobby spells" and arbitrarily excluded multiple training courses - in which the participation of union members is much greater (Green and Lemieux, 2001, pp. 17-18).

In order to achieve comparability between different data sources, we have chosen to focus on *employees without managerial or supervisory roles* and to exclude those who are self-employed and those who have official managerial roles. These people have typically been regarded as ineligible for unionization by the labour movement. To include them in the samples would be to both underestimate and confound unionization effects on education and training. We also focus on *workers aged 25 to 64* and exclude those aged 17 to 24. The rationale for this focus is that the majority of those in younger age cohorts are now still engaged in the initial cycle of formal schooling. While many of these younger people are also engaged in paid employment either periodically or simultaneously, their attachment to the labour market is more complex and requires more detailed study than prior studies have recognized or is possible here (Livingstone, 2002).

DATA SOURCES

Most of the studies cited above focus on the mid-1990s, the latest period for which relevant national-level adult education data has been available. It is important to recognize that this was a period of economic stagnation, including high unemployment and very little creation of full-time wage and salary jobs (Picot and Heisz, 2000). Our method of inquiry is secondary data analysis of recent national surveys containing data on unionization, basic demographic variables and education and training activities related to employment-based formal and informal learning activities. Statistical analyses include basic descriptive and correlation statistics as well as multivariate logistic regression. All findings reported are statistically significant at the .001 level of confidence. The main data sources are the 1998-2002 Labour Force Surveys (LFS), the 1993 and 1997 Adult Education and Training Surveys (AETS), the 1998 New Approaches to Lifelong Learning Survey (NALL), as well as case study data from the Working Class Learning Strategies Project (Livingstone and Sawchuk, 2004).

The Labour Force Survey (LFS) collects monthly data on labour market activities for Canadians 15 years and older from approximately 54,000 households and more than 100,000 eligible household members. This data can be used for analysis of employees' educational attainment and job tenure in relation to union status for the 1998-2002 period.

The Adult Education and Training Survey (AETS) provides information on participation in adult education and formal training and employer sponsorship, as well as data for socioeconomic and demographic profiles of participants and non-participants. Our samples include 14,472 respondents from the 1993 AETS sample and 9,216 respondents from the 1997 sample.

The New Approaches to Lifelong Learning (NALL) survey, conducted in 1998 (N=1,562), is the first Canadian national survey that contains measures on both informal and formal learning practices and provides data on participation in relation to union membership status and a number of other social characteristics.

As noted above, our standardized sample includes the core labour force aged 25 to 64 years old who are employees without managerial roles. All of these respondents are eligible for questions on unionization as defined by the Labour Force Survey methodology (Statistics Canada 2003a, p.6 and p. 17).

RESULTS AND DISCUSSION

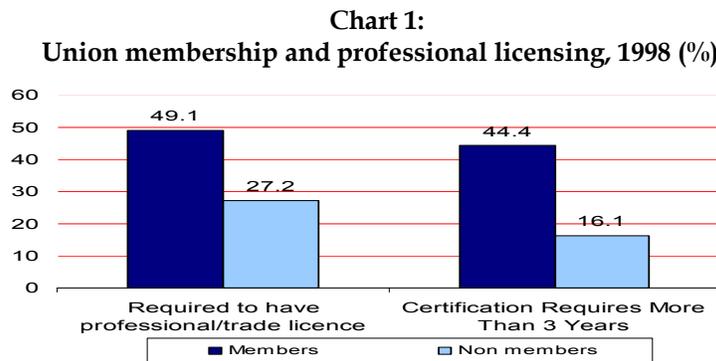
SCHOOLING, JOB TENURE AND LICENCES

Our analysis of the LFS for 1998-2002 period confirms the findings of several other studies in Canada (Fang and Verma, 2002; Akyeampong, 1997; Galarneau,

1996) which show that unionized workers possess higher educational attainments. Educational attainment among Canadians has been rapidly increasing for several decades (Statistics Canada, 2003b). By 2003, nearly 60 percent of the 25 to 64 aged employed labour force had attained post-secondary completion (Labour Force Survey 2003, Custom tabulation). This is one of the most highly schooled labour forces in the world. Unionized non-managerial employees tend to be more highly educated than non-unionized workers. For example, according to the LFS, in 2002 almost one quarter of unionized workers had complete university education compared with one fifth of non-unionized workers.

LFS analysis also finds that unionized workers have consistently had much longer average job tenure than non-unionized workers (10.5 years vs. 6.0 years in 2002). This finding suggests that unionized workers are likely to have deeper job-specific experience and greater informal on-the-job training. In any case, in addition to higher educational attainment, union members are much more likely than non-unionized employees (49% vs. 27%) to possess professional or trade licenses or certificates (see Chart 1). Further, the certificates that unionized workers hold tend to require a longer time to obtain. Among unionized workers with professional or trade certificates, 44% required more than three years, while only 16% of non-unionized workers hold similar certificates.

We should note here that younger workers are generally somewhat less likely to be in unions, often getting early experience in more temporary, hard to organize jobs. But the Canadian labour movement has been aging quite rapidly along with the rest of the labour force. General union membership has now declined from a high of nearly 42% in 1984 to barely 30% of the total labour force today (Jackson and Schetagne, 2003; Yates, 2004) and to less than 30% of 25 to 34 age non-managerial employees. The need to organize younger workers has never been greater for the sustainability of the labour movement.



Source: NALL 1998.

PARTICIPATION IN FURTHER EDUCATION

Although Canadian surveys of adult education and training found very large increases in participation between 1960 and the early 1990s, the AETS surveys in the 1990s found no growth. Indeed, adult education participation rates *declined* between 1993 and 1997 (Statistics Canada, 1997, 2001). Using Statistics Canada criteria which exclude most full-time students, about 28 percent of adults and about 35 percent of the *total* employed labour force (including managerial employees) participated in courses and training programs in 1997, the most recent year for which national data were available for our study. These are substantially lower participation rates than several other OECD countries achieved during the decade (Canadian Education Statistics Council, 2003). Other more recent provincial surveys indicate increases since 1997 (see Livingstone, Hart and Davie, 2003).

Our analysis in this paper will focus on *all* adult education courses taken by workers and on employer-sponsored courses. But analyses conducted for employment-related courses only produce very similar results. Analysis of the 1997 Adult Education and Training Survey (see Table 1) shows that union workers participated significantly more than their non-unionized counterparts in all courses (32% vs. 25%), in job-related courses (24% vs. 18%) and in employer sponsored training (27% vs. 20%). Further analyses summarized in Table 1 show significant differences in the AETS 1997 survey between females and males in regard to level of participation in all courses, job-related courses and employer-sponsored training. Much higher differences are evident between unionized and non-unionized women, which suggests that women in this period may have been relatively more empowered educationally by union membership.

Table 1:
Unionization, Gender and Participation in Education and Training, 1997 (%)

	All Union	Non Union	All Union	Male Non Union	Male Union	Female Non-Union	Female Union
	%	%	%	%	%	%	%
All Courses	24.9	32.3	22.7	26.2	26.9	39.0	
Job Courses	18.6	24.5	17.4	21.1	19.6	28.2	
Emp.-sponsored training	20.1	27.3	19.1	24.1	20.9	30.9	

Source: AETS 1997, employed respondents, without supervisory managerial roles, 25-64 years old.

Analysis of the 1993 AETS Survey found that levels of non-managerial employee participation were generally higher, with course participation declining from 35% to 28% by 1997, while employer sponsored training dipped from 28% to 25%. The differences in favour of union members were sustained, however.

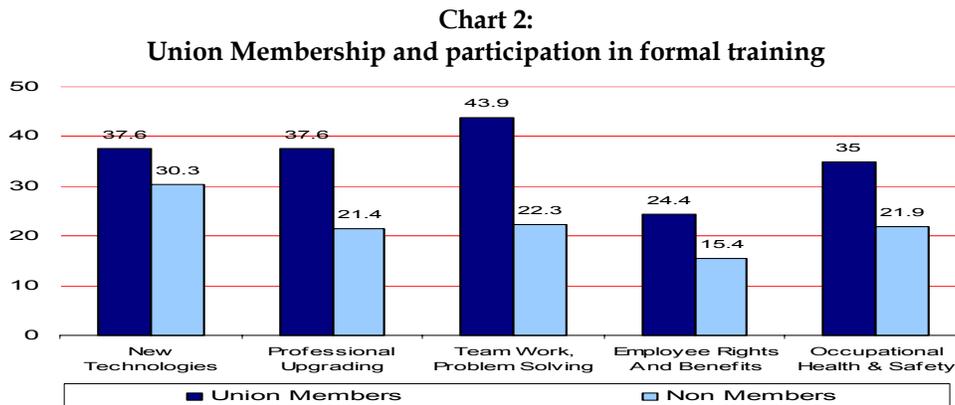
Higher formal educational attainment has always had a very strong effect on continuing participation in adult education courses (see Livingstone, 2002). As Table 2 shows, those workers with university degrees are four times as likely as school dropouts to participate in further education courses, regardless of union status. However, at every level of formal attainment, union members are more likely than others to participate, as well as more likely to receive employer support. Also, the largest differences in course participation in favour of union members (35% vs. 25%) are in the 25 to 34 age group in which union membership is the lowest.

Table 2:
Union Membership Status, Educational Attainment and Training Participation

	Course Participation Members	Course Participation Non-members	Employer Sponsored Training Members	Employer Sponsored Training Non-members
	%	%	%	%
Elementary	11.6	9.6	10.7	7.0
High School	28.9	21.5	24.7	16.7
Post Sec Certif.	34.9	27.3	30.7	22.3
University	47.5	40.7	37.2	33.8
Total	32.3	24.9	27.3	20.1

Source: AETS 1997

Another analysis of the types of courses (including workshops of any duration) that workers engage in, based on data from the 1998 NALL survey (Chart 2), shows that unionized workers participate significantly more in some crucial work-related formal educational activities. Unionized workers are more likely to be provided with formal training about new work technologies, technical or professional upgrading, and various kinds of team work and problem solving, but they also get more courses on employee rights and benefits and occupational health and safety.



Source: NALL 1998

We should emphasize here that most of the above findings refer to participation in *any* type of adult education course. Most prior studies have focused on job-related courses exclusively because both instrumental human capital theory and collective bargaining power advocates predict the strongest direct effects of employment and union status here. The vast majority of courses taken by workers are at least somewhat job-related. But the finding of significant union effects beyond job-specific courses is indicative of broader union influences on workers' lives.

PARTICIPATION IN INFORMAL JOB-RELATED TRAINING

Informal learning activities include a wide variety of things that we learn on our own or with others outside formal educational settings. Since we are inherently learning beings and can engage in informal learning just about anywhere, there appears to be little difference in the general incidence of informal learning by formal educational attainment or by level of participation in further education courses (see Livingstone 2002). Nor, according to the 1998 NALL survey, do unionized workers generally spend any more time in job-related informal learning activities than non-unionized workers do. However, further analysis of the NALL data shows that unionized workers do participate more in several types of employment-related informal learning activities (Table 3). Unionized workers are more likely to spend time with workmates informally learning new job tasks, new technologies and team work processes. There are even more significant differences in the extent to which unionized workers learn informally about "rights issues", including occupational health and safety, and employee rights and benefits issues, but also general public and political issues. Union settings appear to facilitate more collective informal learning among

workers about human rights and also encourage related workers' demands for relevant employer-sponsored formal training.

Table 3:
Union Membership and Work Related Informal Learning

	New Job Tasks	New Technologies and Equipment	Team Work, Problem Solving	Employee Rights and Benefits	Occupational Health and Safety	Public and Political Issues
Union Members	60.5%	51.4%	64.2%	49.1%	61.3%	57.2%
Non Member	54.9%	41.1%	56.5%	39.6%	46.9%	47.6%

Source: NALL 1998

MULTIVARIATE ANALYSIS OF UNION EFFECT ON EDUCATION AND TRAINING COURSES

Some prior studies have found that direct effects of union membership disappear when other related factors are taken into account (e.g. Green and Lemieux 2001). There is a generally recognized positive relation between formal educational attainment and further training and a negative relation between age and training. Job tenure is also posited to have significant effects either in early emphasis on training to maximize human capital investment or in later emphasis on workers more likely to stay with the firm. All three variables can be considered to have effects on training independent of union status.

A few other organizational factors have positive effects on training. Firm size is generally recognized as significant, with larger firms having greater discretionary resources to support training programs. In the AETS data, only 16% of employees in the smallest firms (under 20 non-managerial workers) took courses while 35% of those in the largest firms (over 500) did so. But union members in firms of most sizes were generally more likely to take courses than non-members. The union difference was most evident in small firms which were the least likely to be unionized and especially among women; unionized women in small firms were twice as likely (33%) to take courses as non-unionized women (17%) in such firms. Public sector organizations tend to be larger - and also more unionized - and generally associated with more course participation among workers than the private sector (39% versus 23%). But unionized public sector female employees were more likely (45%) to take a course than their non-unionized public sector sisters (36%), perhaps partly reflecting a greater capacity to take advantage of affirmative action legislation which has had its most direct application in this sector. We recognize the difficulty of imputing union effects on course participation in this regard. Unions have usually opted to target larger firms with greater numbers of employees and public sector organizations have

often been somewhat easier to organize. But the union difference was quite consistent across firm sizes and the public-private divide.

In any case, multivariate analysis of the AETS data when age, education and job tenure are taken into account shows that union membership retains a statistically significant impact on workers' participation in all courses, job-related courses and employer-sponsored training. Logistic regression for the 1997 AETS (Table 4) shows that unionized workers have 50% higher crude odds to receive employer-sponsored training and a 44% higher probability for all-course participation than non-unionized workers. Multiple regressions adjusted for age, educational attainment and job tenure are lower but still statistically significant ($p < 0.001$) and show that unionized workers have 28% percent higher probability of receiving employer-sponsored training and 26% higher probability for all-course participation. Logistic regression results for women are substantially higher, with adjusted all-course odds ratios 46% higher for unionized women over non-unionized women, compared with only 9% for unionized men. When other factors are controlled, women's education benefits from union status are clearly greater than men's.

Table 4:
Union Effect on Participation in Education and Training, All Workers, 1997, Crude and Adjusted Odds Ratios

	Sig.	Odds Ratio	95.0% C.I.		Sig.	Adj.* Odds	95.0% C.I.	
			Lower	Upper			Lower	Upper
All courses	.001	1.438	1.433	1.443	.001	1.257	1.252	1.261
Job courses	.001	1.420	1.414	1.425	.001	1.222	1.217	1.227
Emp.-sponsored training	.001	1.499	1.494	1.505	.001	1.282	1.276	1.287

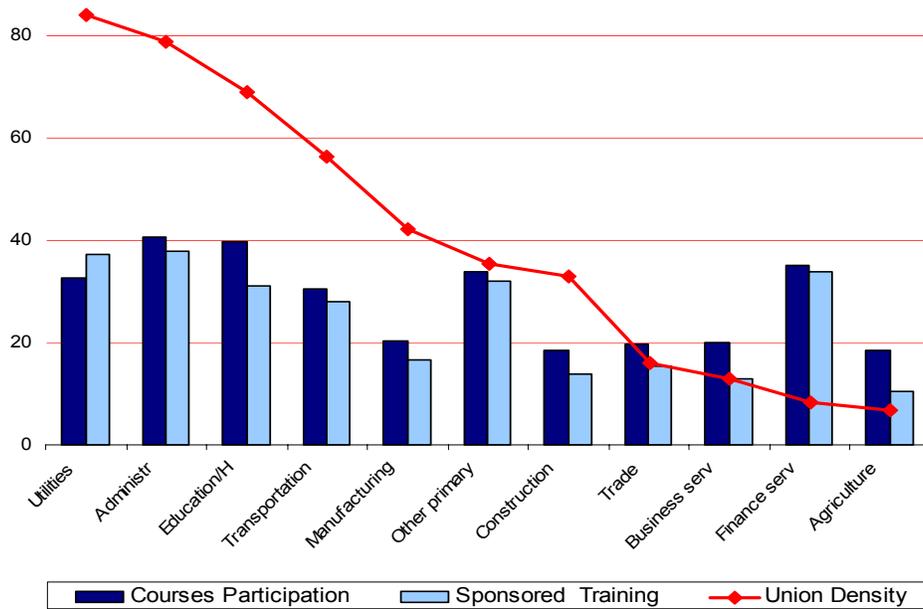
Source: AETS, 1997. *Adjusted for, age, educational attainment and job tenure.

Regression results for the 1993 AETS show similar crude and adjusted odds ratios for union membership and participation in courses. While participation rates declined across the board between 1993 and 1997, the positive effect of union membership was very similar in both years. It is also significant to note that while participation rates became *more* polarized by income level among non-unionized workers during the 1993-97 period of economic stagnation, they became *less* so among unionized workers. (Participation rates in employer-sponsored training for workers making over \$40,000 compared to those under \$20,000 dropped from 2.9 to 2.6 times greater for unionized workers while rates for non-unionized higher-income workers rose from 4.3 to 5.4 times the rates of lower income workers).

SECTORAL DIFFERENCES IN COURSE PARTICIPATION

Union density at the industry level is a good indicator of sectoral union power (see Green 2000). In the 1997 AETS survey, we find that union density and incidence of sectoral participation in education and training show a high level of correlation for course participation ($\rho=0.59$) and employer-supported training ($\rho=0.67$). As Chart 3 shows, the highest participation is in public administration, utilities, education and health, the industries with the highest union density. Participation rates in most industries with lower union density (manufacturing, construction, trade and agriculture) are much lower. The most notable exception to this pattern is financial services (financial institutions, insurance and real estate). The financial sector, which has historically made extensive efforts to avoid unionization in Canada, may now be using increasingly extensive education and training programs at least partly for this purpose.

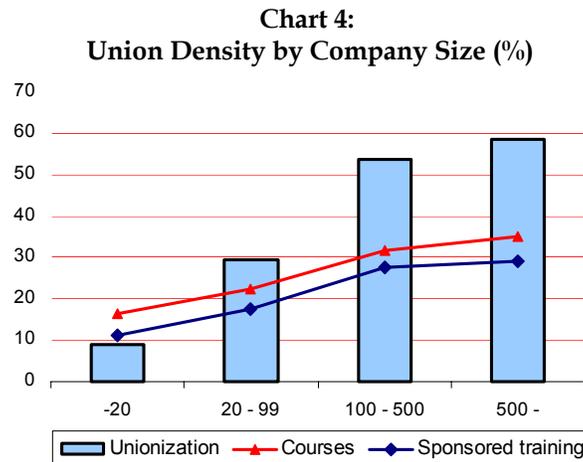
Chart 3:
Union density by industry and incidence of participation in adult education (%)



Source: AETS, 1997

Further analysis confirms that organizational size generally has significant impact on both union density and level of participation in education and training. Larger companies are generally more likely to be unionized and to

have higher levels of course participation and employer-sponsored training (Chart 4).



Source: AETS 1997

These macro-level findings on the relative effects of union density in different sectors and different-sized organizations on the aggregate learning and training profiles of workers support the thesis that unions' bargaining power has a positive impact on access to and participation in education and training in contemporary Canadian society.

OTHER STUDIES

Both formal and informal learning are deeply embedded in many union cultures. As the Canadian Auto Workers (CAW) Education Department (CAW Canada Web Page, 1996) recognizes:

Working people learn from their everyday experiences, from their struggles for dignity and equality, and from their democratic participation in the life of the union at all levels.

Recent case study research illustrates how collaborative informal learning frequently occurs in unionized workforces beyond the purview of management:

We were supposed to watch a hockey game... but we never talked hockey. We talked union issues and labour problems... I'm listening, I'm learning, the whole time I did learn (CAW autoworker, quoted in Livingstone and Sawchuk 2004, p. 94).

This comparative case study of five different union locals also clearly shows that unions with the most concentrated memberships and strongest bargaining power tend to have the highest incidence of both training courses and involvement in job-related informal learning (Livingstone and Sawchuk, 2004).

Educational attainment is increasingly perceived as a highly valuable personal asset by union members and non-union workers alike. Biennial surveys on public attitudes towards education in Ontario show that an increasing majority, almost 80 percent of Ontarians in 2002, believe that education beyond high school is needed to get along in society (Livingstone, Hart and Davie, 2003). A study of recent trends in adult education has documented substantial unmet demand for adult education. Estimates based on the AETS data and the data from the Ontario Survey on Educational Issues indicate that over half of all Canadian adults would like to take a course in the next few years. The same study shows that interest is especially strong for job-related courses (Livingstone, 2001). In this situation, characterized by a very high demand for further education which exceeds resources for participation, the fact that unionized workers continue more frequently to receive education and training - regardless of age, prior education or job tenure - provides support for the thesis that unionized workers' greater negotiating power contributes to this difference.

CONCLUSIONS

Through an extensive secondary analysis of the available national surveys, this study confirms that union status has had generally positive effects on worker' participation in education and training activities in Canada during the mid-1990s period of economic stagnation. We have adapted the basic Labour Force Survey (LFS) methodology and critically revised sampling procedures applied in some prior analyses which found negative or insignificant effects of unionization on education (e.g. Green and Lemieux, 2001; Hum and Simpson, 2001). Our quantitative data analyses consistently show that unionized workers have higher levels of educational attainment and occupational certification, as well as longer job tenure than non-unionized workers. Profiles of the further education of unionized and non-unionized workers generated from the 1993 and 1997 AETS data show that unionized workers participate more in general and job-related adult education and training activities, and are more likely to gain employer-sponsorship of their training. The positive effects of union membership on course participation remains significant when the influences of formal educational attainment, age and job tenure are taken into account. Greater organizational size is also generally associated with both greater union density and higher course participation rates across industrial sectors. The NALL data show that unionized workers participate significantly more in many job-related informal learning activities, most notably concerning human rights issues. Recent

case studies also suggest that workers in stronger unions get more education and training because of their greater bargaining power. But other power relations (gender, race, occupational class) can strongly interact with these effects (see Livingstone and Sawchuk, 2004). Most notably, unionized women have much higher participation in education and training than non-unionized women – perhaps a positive sign for potential union growth among an increasingly feminised labour force.

In general, our analyses suggest the important role of power relations in participation in adult education and training, an aspect overlooked by many of the prior empirical studies steeped in the narrower conceptual models of individual behaviourism and human capital theory. Positive union effects on both job-related and general adult learning persist. But the recent decline in membership levels and aging of the Canadian labour movement suggest a pressing need for further research into the specific educational needs and interests of younger and otherwise disadvantaged workers. Responsive and empowering education strategies remain much needed to attract unorganised younger workers.

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