An International Comparison of Employee Training

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There is increasing recognition that skills development is a lifelong process. Employees enter the labour force with skills acquired primarily through their initial schooling. Over their working lives, they maintain and upgrade their education "stock" through a "flow" of training, reinforced by practical experience. Put simply, in the same way that capital needs continuous investment to replace what has been depreciated and to meet new production requirements, employees also need an ongoing flow of training investment to maintain and upgrade their skills.

Canada has a strong education record. Along with the United States, it has the highest percentage of employees with some postsecondary education, almost double that of countries like Germany, the Netherlands or Switzerland. However, some believe that "Canadian industry is not making adequate investments in training" (Betcherman, 1992).

In the past, it has been difficult to compare Canada's training effort with that of its competitors. Despite the importance of international comparisons, "little is actually known on basic empirical questions such as what the extent and nature of training actually are.... This state of affairs is due partly to the complexity of the issues and partly to the limited availability of training statistics. It is also due to the quality of the data currently available" (OECD, 1991).

Adapted from Employee Training: An International Perspective, *published by Statistics Canada (Catalogue no. 89-552-MPE, no. 2)*. *Constantine Kapsalis is with Data Probe Economic Consulting Inc. He can be reached at (613) 726-6597, or kapsalis@magi.com.*

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This article uses data from the 1994 International Adult Literacy Survey (IALS) to examine employee training in the seven participating countries: Canada, the United States, Switzerland, the Netherlands, Poland, Germany, and Sweden. The IALS is the first major effort to gather consistent international data on literacy and training (OECD and Statistics Canada, 1995). For the first time, it is possible to address important literacy and training questions without being hampered by a lack of comparable training data (see *About the survey*). (For another source of Canadian data, see *Adult Education and Training Survey.*)

The results presented here are from the Canadian perspective. However, the objective of the study is not simply to see how well Canada is doing relative to the other countries, but also to find out what lessons can be learned from the combined experiences of different countries.

Training effort

Training effort is often measured in terms of incidence (percentage of employees who received training) and hours of training per *trainee*. A more comprehensive gauge of training effort over time and across countries is average training hours per *employee.*[2]

In this respect, Canada's training effort relative to that of other countries surveyed was average. The average Canadian employee received 44 hours of training in 1994 (Table 1). This includes all types of training: employer-supported, government-supported, and self-supported. Average hours per employee were similar to those in Switzerland, the United States and Germany, but considerably less than those in the Netherlands (74 hours per employee).[3]

Hours of training per employee in Canada and the United States in 1994 were virtually identical. This comparison is important because of the

About the survey

The IALS, conducted during the autumn of 1994, combined the techniques of household-based surveys with those of educational testing. One of the background questions determined each respondent's training history:

"During the past 12 months, that is, since August 1993, did you receive any training or education including courses, private lessons, correspondence courses, workshops, on-the-job training, apprenticeship training, arts, crafts, recreation courses or any other training or education?"

Respondents were then given open-ended test questions in the official language of their country (a choice was provided to participants in Canada and Switzerland). Statistics Canada's experience with bilingual questionnaires aided in the design of this project. If respondents were unable to speak the designated language, efforts were made to complete the background questionnaire to allow estimates of their literacy levels and to reduce the possibility of distorted results.

Representative samples of the civilian, non-institutionalized population aged 16 to 65 were drawn from each country. Canada and some other countries also included older adults. Sample yields ranged from 2,062 (Germany) to 4,500 (Canada).

As the focus of this article is on the lifelong training of employees, the sample has been restricted to full-time employees between 25 and 60 who worked at least 42 of the last 52 weeks preceding the survey.[1] The self-employed, although a growing share of the workforce, are not included in the analysis since the article looks at employer-supported training.

Table 1
Selected training statistics, 1994

	All training			Employer-supported		
	Incidence	Per trainee	Per employee	Incidence	Per trainee	Per employee
	%	hours	hours	%	hours	hours
Netherlands	48	154	74	38	138	52
Switzerland	46	110	50	29	85	24
United States	53	86	45	42	69	29
Canada	**43**	**104**	**44**	**33**	**83**	**27**
Germany *	23	181	42	...	...	...
Poland	24	157	29	17	118	16
Sweden **	62	..	..	..	..	..

	Employee-supported			Government-supported		
	Incidence	Per trainee	Per employee	Incidence	Per trainee	Per employee
	%	hours	hours	%	hours	hours
Netherlands	14	156	21	3	--	--
Switzerland	22	106	23	7	--	--
United States	12	108	13	4	--	--
Canada	**15**	**121**	**18**	**5**	**--**	**--**
Germany *	...	...	...	...	...	...
Poland	6	259	14	1	--	--
Sweden **	..	..	..	..	..	..

Source: International Adult Literacy Survey, 1994
Notes: May not add to totals because some training may be supported by more than one source, or sources not specified. Order of countries is based on hours per employee for all training.
* *Source of training support was collected, but the data are not comparable.*
** *Data include the self-employed. No data were collected for hours of training or source of training support.*

countries' extensive trade links. Also, Canada-U.S. comparisons are more meaningful than those with other countries because of the similarities between the two countries – including the extensive use of postsecondary education. By contrast, comparisons with European countries may be more useful as broad indicators than as precise measures.

Sources of support

The two most common sources of financial support for training were employers and employees themselves. Government-supported training was considerably less frequent. In general, employer-supported training covered more employees than did employee- (or self-) supported training, but it involved fewer hours per trainee. In all countries, in terms of average hours per employee, employer-supported training exceeded self-supported training.[4]

In the case of Canada, 33% of employees received employer-supported training, while 15% received training on their own (Table 1). A much smaller percentage (5%) received government-supported training. On average, employer-supported training involved fewer hours than employee-supported training (83 versus 121 hours per trainee).[5]

Canada's balance between the two types of training, in terms of average hours per employee, was also similar to the average for other countries covered in the survey. Canadian employees tended to receive somewhat more training on their own, while Americans obtained more through their employers.

Demand for training

Overall, Canada had the highest incidence of employees who wanted more training for career- or job-related reasons (33%). The explanation for this is far from simple, but it could mean at least two things: the lower the level of training, the greater the amount of unfulfilled demand for training; and the more training employees receive, the more they tend to want. Regardless of the interpretation, Canadian employees do seem more willing to undertake further training than those in other countries (Chart and Table 2).

Chart
One-third of Canadian employees want more training.

Source: International Adult Literacy Survey, 1994
Note: Information was not collected for Germany or Sweden.

Training and employee characteristics

The relationship between the incidence of training and employee characteristics was similar in all seven countries. Furthermore, groups with a higher incidence of employer-supported training often had a higher incidence of self-supported training, perhaps a reflection of these workers' perception of their need for training.

Women and employees in small firms generally received less employer-supported training than men or employees of large firms. This was the case for all participating countries. In spite of being more likely to report a preference for more training, employees in these two groups received relatively less support.

Finally, in all countries, level of education, level of literacy and incidence of training were strongly linked in a "virtuous cycle" (Figure).

Conclusion

Analysis of the IALS data shows that Canada has strengths in the area of education and training on which it can build. These strengths include a high percentage of employees who would like more career- or job-related training.

Employers play an important role in promoting training. However, self-employed and contingent employees, who make up a growing share of the labour force, typically do not benefit from employer-supported training. Moreover, this training tends to be

Table 2
Incidence of training by employee and job characteristics, 1994

	Age			Sex		Education *		Document literacy *		Company size		Wages *	
	25-34	35-44	45-60	Men	Women	Low	High	Low	High	<100	100+	Low	High
	% of employees												
All training													
Netherlands **	54	48	41	47	54	45	61	36	54	..	..	44	52
Switzerland	54	48	37	46	48	42	64	33	56	38	52	36	55
United States	53	54	52	51	54	37	71	37	64	39	59	53	70
Canada	**47**	**51**	**30**	**45**	**39**	**31**	**56**	**27**	**50**	**41**	**44**	**31**	**49**
Germany	26	24	20	21	29	20	34	13	28	19	27	24	25
Poland	27	24	20	23	25	18	44	20	35	23	25	19	31
Sweden **	62	64	61	59	67	57	73	50	65	..	..	58	64
Employer-supported													
Netherlands **	41	40	33	39	35	35	49	26	43	..	..	31	44
Switzerland	31	28	27	30	26	26	41	21	35	21	35	20	36
United States	41	44	42	42	42	29	57	28	52	26	49	40	60
Canada	**35**	**40**	**25**	**36**	**28**	**23**	**45**	**18**	**40**	**27**	**35**	**23**	**38**
Germany ***	...	...	...	...	...	...	...	...	...	...	...	...	...
Poland	18	18	16	18	16	15	27	15	24	15	20	13	24
Sweden †	..	..	..	..	..	..	..	..	..	..	..	..	..
Employee-supported													
Netherlands **	19	11	8	10	25	12	18	11	14	..	..	17	11
Switzerland	31	24	12	19	29	21	28	14	28	21	23	22	22
United States	14	11	12	12	12	5	20	6	16	14	11	12	19
Canada	**22**	**17**	**8**	**15**	**16**	**7**	**24**	**9**	**18**	**19**	**14**	**14**	**17**
Germany ***	...	...	...	...	...	...	...	...	...	...	...	...	...
Poland	10	5	3	5	8	3	19	3	14	8	4	6	7
Sweden †	..	..	..	..	..	..	..	..	..	..	..	..	..
Want more job-related training													
Netherlands **	26	22	15	20	27	20	27	19	23	..	..	21	23
Switzerland	34	33	21	29	31	30	27	29	30	31	29	30	31
United States	30	30	22	26	29	21	35	20	32	27	28	27	36
Canada	**36**	**36**	**27**	**31**	**35**	**28**	**38**	**33**	**32**	**43**	**29**	**32**	**32**
Germany ††	..	..	..	..	..	..	..	..	..	..	..	..	..
Poland	18	16	12	16	15	11	30	12	23	14	17	14	19
Sweden ††	..	..	..	..	..	..	..	..	..	..	..	..	..

Source: International Adult Literacy Survey, 1994
Note: Order of countries is based on hours per employee for all training.
* *See note 6.*
** *Information was not collected on company size for the Netherlands or Sweden.*
*** *Source of training support was collected, but the data are not comparable.*
† *Data include the self-employed. No data were collected for hours of training or source of training support.*
†† *Information was not collected for Germany or Sweden.*

geared to present job requirements, while much of the demand for training comes from individuals who know they must upgrade their skills for new jobs. This suggests that public education institutions will be under increasing pressure to meet the training needs of the workforce.

Two areas that require further study are employer-supported training of female employees and of workers in small businesses. Both issues are complex. For example, the gender gap in employer-supported training may reflect the concentration of women in certain occupations, as well as the conflict between workplace and family demands. Similarly, the lower incidence of such training in small businesses may reflect, for example, a higher reliance on informal on-the-job training, or the absence of a formal human resource function. □

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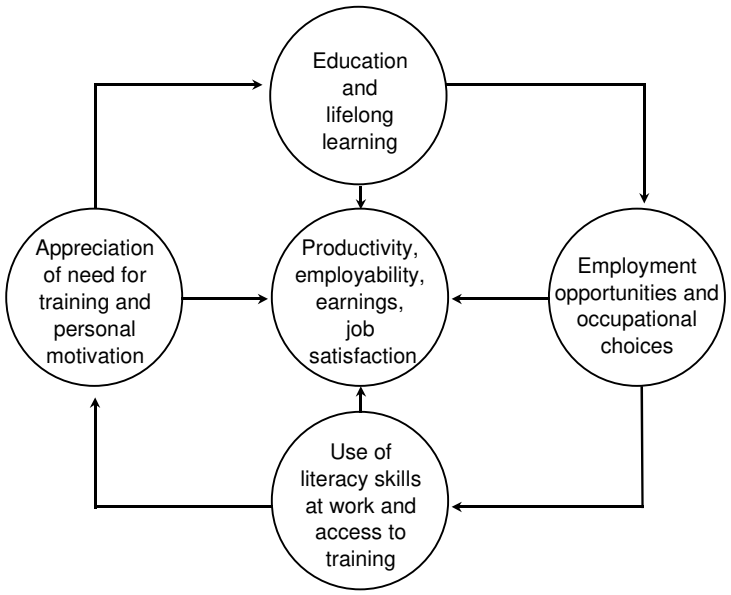
Figure
The education-literacy-work virtuous cycle



The education-literacy-work virtuous cycle

Employees with better education and training have a better chance of securing better-paying jobs demanding more skills. This background allows them to use their skills at work, and provides better access to employer-supported training. Jobs requiring more skills also create a stronger appreciation of the importance of training, which is a key motivator for taking further training and education. The above virtuous cycle is usually reinforced by the interaction of literacy skills used at work and at home.

Notes

1 The objective of the age cut-off was to exclude employees who may still have been students, and employees who were nearing retirement. The 42-week employment cut-off was meant to ensure that employees had an employer most of the year.

2 "Hours per employee" is the incidence rate multiplied by average hours of instruction per trainee. For example, if the incidence rate is 25% and the average hours per trainee is 400, the average hours of training per employee will be 100. Hours per employee is a more comprehensive measure because it combines information on both the extent (incidence) and intensity (hours per trainee) of training.

3 Also, Canada's training effort was probably less than Sweden's. The latter had the highest incidence of training. However, no information exists on that country's hours of training, which would be necessary for a complete assessment of its training effort.

4 No information was available on training support for Sweden. Information for Germany was available but not comparable with that for the other countries.

5 Because of sample limitations, it was not possible to estimate the average hours of government-supported training.

6 Because of institutional differences between countries, and sample size limitations, the education codes were collapsed into two broad categories: low corresponds roughly to secondary education or less; high corresponds roughly to postsecondary education.

Document literacy refers to the knowledge and skills required to locate and use information in various formats, including job applications, payroll forms, transportation schedules, maps, tables and graphics. These tasks were scored on a scale from 0 to 500. Low scores were from 0 to 275; high scores were from 276 to 500.

Wages are expressed as either low (first three quintiles) or high (fourth and fifth quintiles).

Adult Education and Training Survey

The Adult Education and Training Survey (AETS), a supplement to the regular Labour Force Survey, has been sponsored by Human Resources Development Canada, and conducted by Statistics Canada, a number of times. The 1994 survey, which covered activities during 1993, provided some findings similar to the IALS. Details can be found in Couillard et al. (1997), de Broucker (1997) and Kapsalis (1996). The survey collected information on education and training activities of people aged 17 and over. The report on the survey focused more on job-related education or training and excluded students enrolled full time in certificate, diploma or degree programs (unless they were supported by their employer). Although the two surveys' definitions, age groups and scope differ, some of the AETS results parallel those of the IALS and are presented below.

Total training effort

According to the AETS, 5.8 million or 28% of Canadians aged 17 and over participated in adult education or training activities in 1993. On average, participants engaged in 103 hours per trainee, or about 29 hours per Canadian adult overall. For those employed full time, the participation rate was 39% and the number of hours of training per trainee was 88 on average – or 34 per full-time employee.

Support for job-related training

More than 4 million Canadians took part in some form of *job-related* training in 1993. This represented 20% of the population aged 17 and over. Among those employed full time, 31% reported taking job-related education or training in 1993. To break this down further, 25% of full-timers received some support from their employer for their job-related training (that is, employer-sponsored), while 6% received no assistance (non employer-sponsored).

Desire for training

The AETS found that 26% of Canadians had unsatisfied training wants in 1993. A higher proportion of those already participating in training expressed this opinion (37%) than did non-participants (21%). Women were more likely than men to make this claim (29% versus 23%). Among training participants, 41% of women and 32% of men had unsatisfied training wants.

Training by characteristics of employees

Like the IALS, the AETS found that workers' participation in job-related training diminished with age: 25 to 34, 30%; 35 to 44, 31%; 45 to 54, 27%; 55 to 64, 12%. However, unlike IALS, the AETS found little difference in rates for working men (26%) and working women (27%). Workers with more education were more likely to engage in such training: 0 to 8 years, 6%; some secondary, 14%; high school graduation, 22%; some postsecondary, 36%; postsecondary certificate or diploma, 33%; university degree, 41%. According to the AETS, job-related training participation is also positively related to company size: under 20 employees, 19%; 20 to 99, 26%; 100 to 199, 36%; 200 to 499, 33%; 500 and over, 42%. Finally, workers with higher incomes had higher rates (selected results): less than $15,000, 20%; $25,000 to $29,999, 27%; $40,000 to $49,999, 37%; $60,000 to $74,999, 52%.

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