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Employee Training: An International Perspective

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Data Probe Economic Consulting

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Employee Training: An International Perspective

Constantine Kapsalis

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International Adult Literacy Survey

Employee Training: An International Perspective

Constantine Kapsalis

Data Probe Economic Consulting Inc.

The International Adult Literacy Survey (IALS) was a seven-country initiative conducted in the fall of 1994. The Canadian component of the IALS study was primarily funded by the Applied Research Branch and the National Literacy Secretariat of Human Resources Development Canada.

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Executive summary

Introduction

The 1994 International Adult Literacy Survey (IALS), besides testing adult literacy in seven countries, collected comparable information on training. This study uses the IALS data to look at employee training in the seven participating countries: Canada, the United States, Switzerland, the Netherlands, Poland, Germany and Sweden. The term *training* is used throughout this study to refer to the lifelong training activities of employees, past the initial stage of formal education.

IALS definition of training

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, recreation courses or any other training or education?

There is growing recognition that to develop skills is a lifelong process. Employees enter the labour force with an initial “stock” of human capital acquired primarily through their initial formal education. Over their working lives, employees maintain and upgrade their education stock through a “flow” of training, reinforced by practical experience. In the same way that physical capital needs continuous investment to replace what has been depreciated and meet new production requirements, employees also need a continuous flow of training investment to maintain and upgrade their human capital.

Skills = Initial education + Lifelong learning through training and experience

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

In the past, Canada’s training effort was difficult to benchmark accurately relative to 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).

The IALS is the first major international effort at gathering consistent training data across several countries. This initiative is particularly exciting. For the first time, it is possible to address important training questions across different countries without being hampered by the traditional lack of comparable data.

This study attempts to analyze systematically the training data collected through the IALS. The study focuses on the lifelong training of employees, past the initial stage of formal education. Consequently, the sample was restricted to full-time employees between the ages of 25 and 60, who worked at least 42 of the 52 weeks preceding the survey. The self-employed, although they represent a growing share of the work force, are not included in the study.

The results are presented here from the Canadian perspective. However, the study's objective is not only 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.

Main findings

Canada's training effort relative to the rest of the IALS countries, measured in terms of hours of training per employee, was found to be average. The average employee in Canada received 44 hours of training in 1994, similar to the hours of training per employee in Switzerland, the United States and Germany. However, Canada's training effort was considerably less than the Netherlands (74 hours per employee).¹

One finding of particular interest to Canada is the virtual equality of training effort, measured in hours of training per employee, between Canada and the United States. This comparison is important for Canada because of its extensive trade links to the United States. Also, comparisons between Canada and the United States are more accurate than comparisons to other countries because of the similarity in training institutions between the two countries. By contrast, comparisons of Canada to other countries should be treated as broad indicators, rather than precise measures.

Canada's balance between employer- and employee-supported training was also average. Compared to the United States, for example, Canadian employees usually receive somewhat more training on their own, whereas United States employees tended to receive somewhat more training through their employer.

Particularly interesting is the fact that Canada had the highest rate of employees reporting that they wanted to take more career or job-related training. Although interpretations of this statistic differ, we can reasonably conclude that Canadian employees are relatively more supportive of further training than those in the other countries.

Among other interesting findings of this study is the similarity of the relationship between the incidence of training and employee characteristics across all seven countries. A related finding is that often those groups that had a higher incidence of employer-supported training also had a higher incidence of own-supported training. This finding suggests that differences in employer training reflect, to at least some degree, differences in employee perception of their need for training.

However, this study also found evidence of barriers to employer-supported training faced by women and employees in small firms. This phenomenon was common among all participating countries. Employees in these two groups received relatively less employer training and were more likely to report that they wanted more career or job-related training.

Implications

These findings show that Canada has strengths in the area of education and training on which to build an even stronger competitive advantage. The fact that a high percentage of employees expressed the desire for more career or job-related training further strengthens the case that Canada is fertile ground for further emphasis on training.

Two areas of concern that need further study and policy priority are: employer-supported training of female employees; and employees working for small businesses. Both issues are complex. For example, the gender gap in employer-supported training may reflect both the concentration of women in certain occupations and the conflict between workplace demands and traditional views about women's role in the family.

Similarly, the lower incidence of employer-supported training in small businesses may reflect, for example, a higher reliance on informal on-the-job training, or barriers to implementing formal training resulting from the absence of a formalized human resource function.

Finally, the objective of training is to achieve and maintain a highly skilled work force. This requires more than easy access to training. It also requires an environment of high employment that keeps the skills of the labour force up-to-date by avoiding long periods of unemployment. It requires promotion of jobs in the "new" economy that are skill intensive. It requires workplace arrangements that empower employees to make workplace decisions and challenge them to use existing skills and develop new ones. It finally requires a cultural environment that makes education and literacy a central element of the quality of life of a nation.

Introduction

Training is being recognized increasingly as the key to labour markets competing internationally and performing successfully. “As firms and labour markets change, some jobs become obsolete and new ones are created. The new jobs require literate workers. In a flexible economy that is well positioned to take advantage of change, people will need to change jobs—perhaps many times. Hence workers need to continuously acquire new skills and qualifications” (OECD and Statistics Canada, 1995).

International studies of training effort and practices are particularly important in addressing such questions as:

- How does a country’s training effort compare with that of its competitors? Does its current level of effort constitute a competitive advantage or disadvantage?
- How similar is the relation between training and employee characteristics among different countries? To what extent are issues of access to training universal in nature, as opposed to being unique to each country?
- How is the training effort shared between employers and employees? Does it matter if training is provided through the employer or taken by employees on their own through, for example, public institutions?
- How is training delivered? How does workplace-based training compare to institution-based training?
- How strong is employees’ desire for training in various countries? What is the role of employers and employees in training decisions?

International training studies face major challenges. The latter result mainly from differences in institutional arrangements between different countries and the lack of comparable data. As a result, despite the importance of training, “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).

The International Adult Literacy Survey (IALS) is the first major international effort at gathering consistent training data across several countries. This initiative is particularly exciting because, for the first time, important training questions can be addressed across different countries without being hampered by the lack of compatible training data.

This study attempts to analyze systematically the training data collected through the IALS. The complete training section of the IALS questionnaire was collected by Canada, the United States, Switzerland (German- and French-speaking populations only), the Netherlands, Poland and Germany. Sweden collected limited information on training incidence, which forms a small part of this study.

The analysis has been conducted from the Canadian perspective. One motivation of the study was to address the issue that “it is widely believed that the Canadian industry is not making adequate investments in training” (Betcherman, 1992). However, the study’s objective is not only to see how well Canada is doing relative to the other countries, but also to find out what lessons we can learn from the combined experiences of different countries.

The study focuses on the lifelong learning of employees. The self-employed, although they form a growing share of the work force, are not included in the study. Primarily for methodological reasons, the sample was further restricted to full-time employees between the ages of 25 and 60 who worked at least 42 of the 52 weeks preceding the survey. The rationale for the additional sample restrictions are discussed in the next chapter under “Sample selection”.

The main contribution of the study is to provide new statistics and insights into training issues. Because of differences in training practices or institutional arrangements between different countries, however, caution is needed in interpreting the results. In particular, comparisons between Germany and Canada present the most challenges because of Germany’s unique system of apprenticeship. On the other hand, comparisons between Canada and the United States are less problematic because the two countries have relatively similar arrangements for institutional training. Training differences between the two countries are of particular interest to Canada because the United States is Canada’s major export market, accounting for 80% of all its exports.

In what follows, Chapter 1 provides a methodological background to the study; Chapter 2 defines different measures of training effort and compares them across countries; Chapter 3 looks at two components of employee training: employer-supported and non-employer-supported training; Chapter 4 compares the training effort of employees across different characteristics; Chapter 5 looks at the desire of employees for more training; Chapter 6 examines other aspects of training, such as the reasons for training; and Chapter 7 makes brief concluding remarks and suggests possibilities for future research.

Chapter 1

Background

Definition of training

Training was defined in the IALS as follows: “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, recreation courses or any other training or education?”

One potential issue is whether to include on-the-job training. Although it is a valuable component of training, on-the-job training is difficult to measure. However, the effect of including on-the-job training is likely to be limited because only a few employees reported on-the-job training as the only source of training. For example, in Canada 4% of the trainees reported that they received only on-the-job training.

Another potential issue is that in the German questionnaire, training was defined more narrowly. It excluded apprenticeship and recreation courses. However, the effect of both exclusions is probably minimal. First, because typically German apprentices are young, restricting the sample to older employees makes the German training data more comparable to the rest of the countries. Second, excluding recreation courses is probably not too serious because most courses reported in the IALS were taken for career or job-related reasons.

Sample selection

The study focuses on full-time employees, excluding the self-employed and working students. A number of additional sample restrictions were needed to minimize the possibility of including students in the sample and to improve the comparability of the results across countries.

First, the sample was restricted to employees 25–60 years of age. Young employees were excluded for two main reasons:

- The study’s focus is the lifelong learning of employees, i.e., the education and training that takes place after they complete their initial formal education, which usually is by age 25.²
- In the case of apprenticeship, it is difficult to distinguish between students and non-students. This problem is particularly acute in Germany where apprenticeship is a major component of the training system. Because most apprentices are young, excluding employees under 25 years of age also excludes most apprentices.

Second, part-time employees were excluded from the sample.³ Exploratory analysis showed that the training experience of part-time workers differs from that of full-time workers. However, because part-time workers constitute a small percentage of the 25 and over work force, it is difficult

to analyze them separately.⁴ For the purpose of this report, it was felt that we might obtain a more comparable picture of training activities across countries by excluding part-time workers and focusing on those with a stronger attachment to the work force.

Finally, the sample was restricted to those who worked at least 42 of the 52 weeks preceding the survey. Including employees with fewer weeks of employment would have distorted the training results in at least two ways:

- Employees with few months of employment are more likely to have been students for part of the year and, therefore, to have above average hours of own-supported training.
- On the other hand, because these employees have not been employed for a full year, they have fewer than average opportunities to receive employer-supported training.

Excluding part-time employees and employees with less than 42 weeks of employment reduced the Canadian sample by 27%. However, it was felt that the added sample restrictions produced more consistent results across the seven participating countries.

Employee characteristics

Table 1.1 shows the distribution of employees that met the selection criteria. All estimates presented in this study have been weighted so that they represent the corresponding employee populations in each country. Estimates based on fewer than 30 observations have been suppressed; those based on 30 to 99 observations have been marked with an asterisk to indicate that they are less reliable.

Because of sample-size limitations, the original categories were regrouped into broader categories, particularly in some of the participating countries. Also, the use of broader categories made the results, such as for the level of education, more comparable across different countries.

Particularly important are differences in the distribution of employees by level of education and literacy. These two variables are interesting on their own merit because education and literacy are key ingredients for competitiveness and employment. They are also interesting because, as shown below, they correlate positively both with the level of training and the desire for more training. One may refer to this correlation as the “virtuous cycle”: employees with a higher level of education and literacy have a stronger appreciation for training and are more actively engaged in lifelong training. At the same time, those engaged in lifelong training are more likely to upgrade their educational status and maintain a high level of literacy.

Table 1.1 Distribution of employees by characteristics

	Canada	United States	Switzerland	Netherlands	Sweden	Poland	Germany
	%						
Age group							
25–34	34	29	40	39	24	32	32
35–44	31	34	26	31	33	42	30
45–60	35	37	34	30	43	27	38
Gender							
Male	63	55	67	79	60	54	74
Female	37	45	33	21	40	46	26
Industry							
Goods-producing industries	29	30	33	35	28	45	42
Sales/Transportation/Business services	31	33	35	34	31	17	27
Community/Personal services	40	37	32	31	41	38	31
Occupation							
Professionals/Managers	48	41	49	53	58	34	36
Craftsmen/Operators/Assemblers	25	23	22	27	23	42	35
Clerks/Service/Sales	27	36	29	20	19	24	30
Size of company							
Under 100	25	29	41	–	–	51	47
100+	75	71	59	–	–	49	53
Job status							
No supervisory responsibilities	59	54	60	64	–	77	15
Some supervisory responsibilities	41	46	40	36	–	23	85
Wage quintile							
Lowest three quintiles	33	68	35	48	21	54	39
Highest two quintiles	67	32	65	52	79	46	61
Education							
Low: Levels 1–2	56	54	77	76	66	77	79
High: Level 3	44	46	23	24	34	23	21
Prose literacy							
Low: Levels 1–2	38	38	47	36	24	74	46
High: Levels 3–5	62	62	53	64	76	26	54
Document literacy							
Low: Levels 1–2	33	42	41	29	19	72	35
High: Levels 3–5	67	58	59	71	81	28	65
Quantitative literacy							
Low: Levels 1–2	34	38	33	27	20	63	26
High: Levels 3–5	66	62	67	73	80	37	74

– Information not collected.

Note: Swedish figures include the self-employed.

In terms of level of education, Canadian full-time employees fared well. In particular, 44% had Level 3 education (which roughly corresponds to postsecondary education). This result is just below the rate in the United States (46%) but considerably higher than in the other countries.

Definition of education

Because of institutional differences between countries and sample size limitations, the education codes were collapsed into two broad categories:

- (a) Levels 1 and 2 (roughly corresponding to primary and secondary education); and
- (b) Level 3 (roughly corresponding to postsecondary education). Despite the highly aggregate nature of the education variable, it is still useful for testing whether more educated employees tend to receive relatively more training or not.

In terms of level of literacy, Canadian employees ranked around the middle. They ranked below Swedish and Dutch employees in all types of literacy, and German and Swiss employees in quantitative literacy. However, they ranked above United States employees in document and quantitative literacy, and above German, Swiss and Polish employees in prose and document literacy.

Definition of literacy

Three types of literacy were tested by the IALS:

- (a) *prose literacy* refers to the knowledge and skills needed to understand and use information from texts including editorials, news stories, poems and fiction;
- (b) *document literacy* refers to the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps, tables, and graphics; and
- (c) *quantitative literacy* refers to the knowledge and skills required to apply arithmetic operations, either alone or sequentially, to numbers embedded in printed materials, such as balancing a chequebook, figuring out a tip, completing an order form, or determining the amount of interest on a loan from an advertisement.

In each of the three literacy domains, tasks of varying difficulty were placed on a scale from 0–500. The range of scores corresponding to each level are as follows: Level 1 (0–225); Level 2 (226–275); Level 3 (276–325); Level 4 (326–375); and Level 5 (376–500).

Chapter 2

Level of training effort

The first motivation of the study was to see how Canada's level of training effort compares with that of other countries. A widely shared impression in Canada is that "employers invest less in employee training than employers in a number of competing countries, such as Japan and Germany. A frequently drawn policy implication is that employers should be encouraged to increase their effort through the 'stick' of payroll taxes or the 'carrot' of training tax credits" (Kapsalis, 1996a).

A favourable comparison in itself does not necessarily alleviate all concerns. One would need to also consider other aspects such as, for example, the quality of training or accessibility across all employees. However, measures of the level of training effort do provide an initial insight into the relative adequacy of a country's training effort.

Measures of level of training effort

The incidence rate and the average hours per trainee are two basic measures of the level of training effort. However, these two statistics need to be interpreted carefully. In particular:

- A certain incidence rate does not mean that the rest of the employees do not have access to training. Even if the incidence rate remains the same year after year, the participants are not necessarily the same. As a result, the longer the period over which training is measured, the higher the percentage of employees participating in training.⁵
- Higher incidence or higher hours per trainee do not necessarily imply greater training effort. Some countries train less frequently but more intensively, whereas others do the opposite. In that sense, neither the incidence rate nor the hours per trainee provides an adequate measure. The first favours countries that train their employees more often but less intensively, whereas the second favours countries that train their employees more intensively but less frequently.

A better gauge of training effort over time and across countries is average training hours *per employee* (rather than per trainee). Hours per employee is simply the product of the incidence rate and the average hours per trainee. For example, if the incidence rate were 25% and the average hours of training per trainee were 400, the average hours of training per employee would be 100. Hours per employee provides a better measure because the same total hours of training produce the same measure, regardless whether the hours are spread over a small or a large number of employees over a given period.

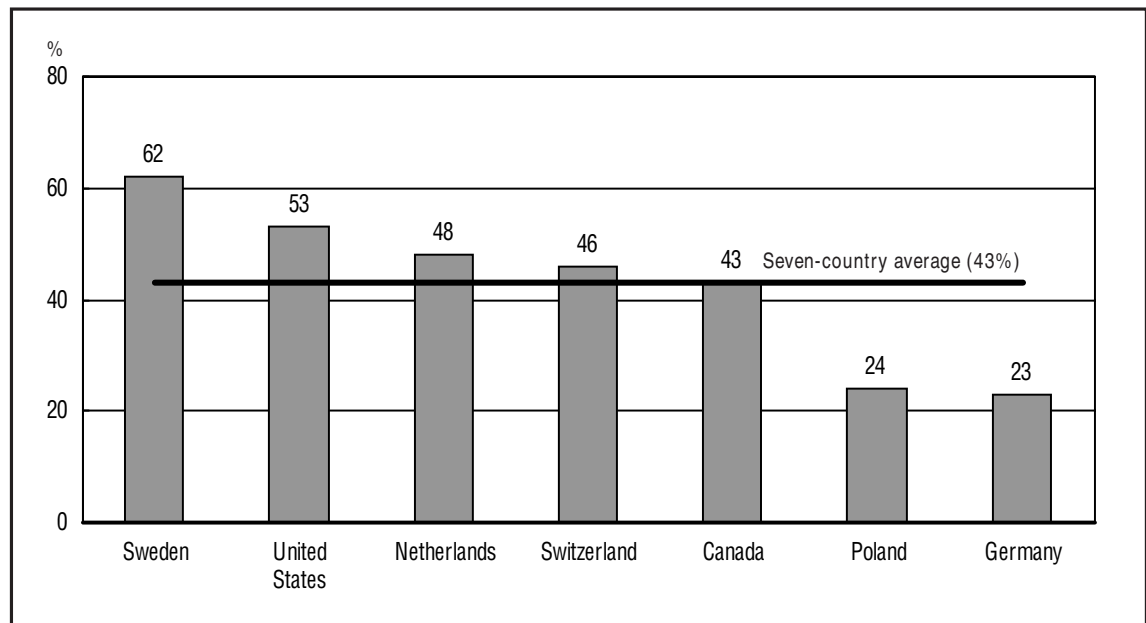
Incidence of training

As an indicator of training effort, the incidence of training is limited because it does not reflect the intensity of training. However, incidence of training is often used because it tends to be more readily available than hours of training. Also, because this figure was the only IALS training

statistic that was collected from Sweden, it allows us to include this country in comparing training effort across countries.⁶

According to the IALS, 43% of Canadian employees participated in training activities in 1994. This number was equal to the average incidence for all seven countries in the survey. Poland and Germany had a lower incidence than Canada, whereas the rest of the countries had a higher incidence. Sweden ranked significantly above all countries, followed by the United States (Figure 2.1).

Figure 2.1 Incidence of training among employees

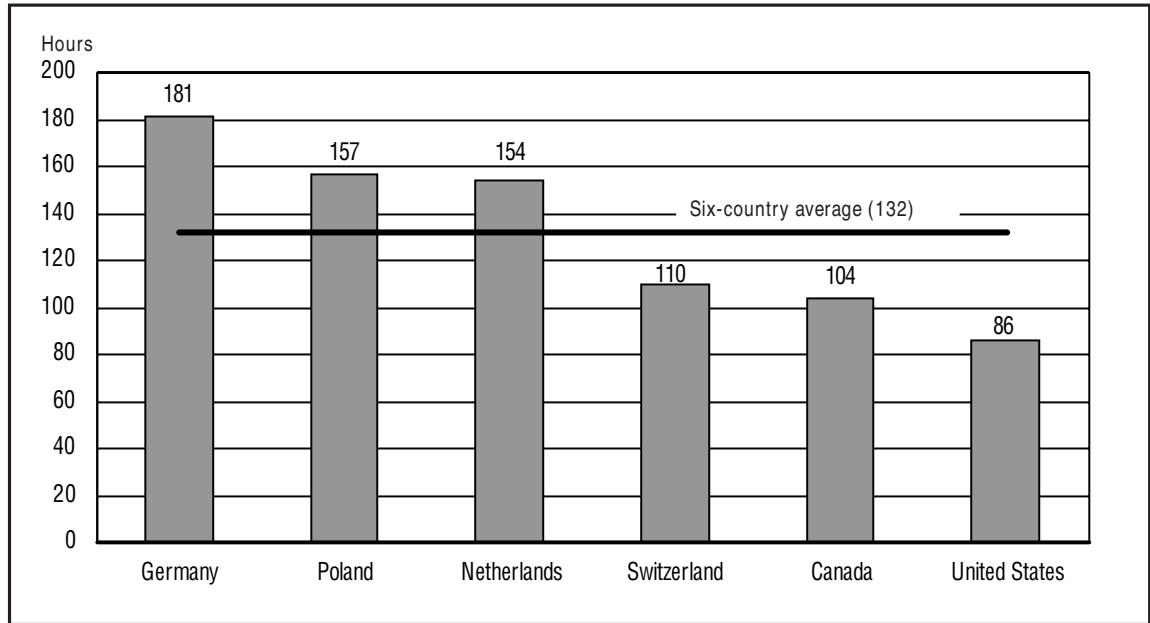


Hours of training per trainee

The average Canadian trainee received 104 hours of training in 1994. This number was lower than the average for all six countries in the survey (no information on hours of training was available for Sweden) (Figure 2.2).

The ranking of countries by hours of training per trainee is practically the reverse of the ranking by incidence of training. The United States had the lowest hours per trainee among all countries, followed by Canada. At the other end of the range, Germany had the highest number of hours of training per trainee, followed by Poland.

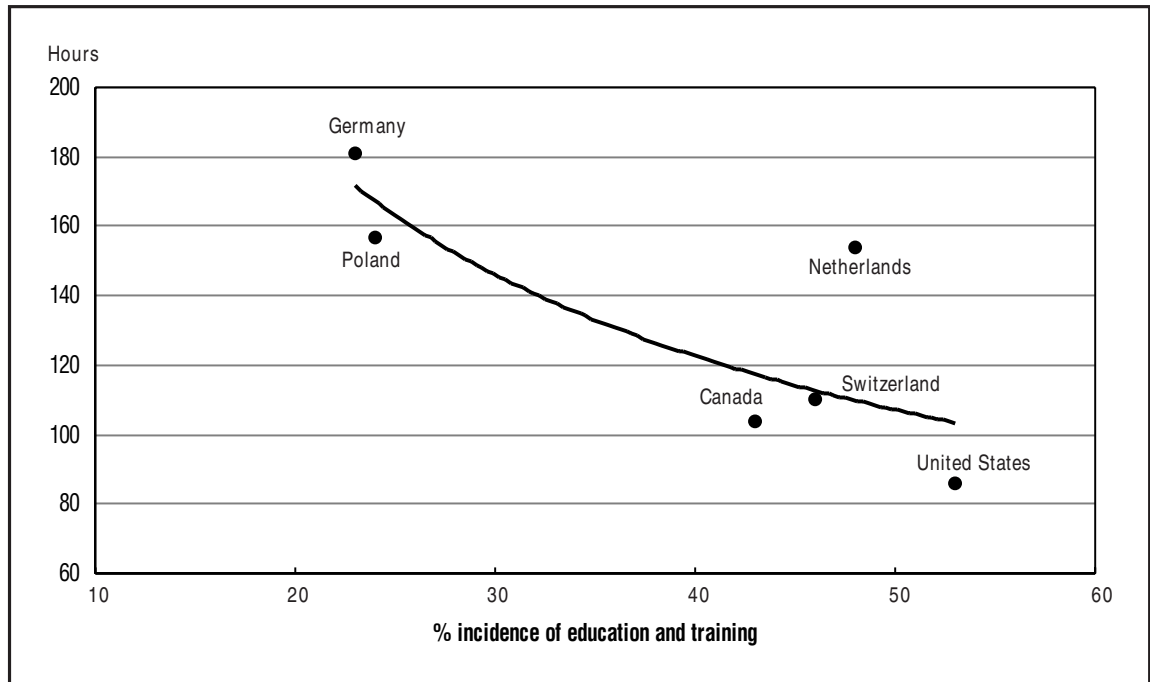
Figure 2.2 Hours of training per trainee



Incidence vs. hours

The results so far suggest the presence of a trade-off between the incidence and hours of training (Figure 2.3). In some countries, such as Canada and the United States, employees usually receive training more often but less intensively. By contrast, in other countries, like Germany and Poland, employees tend to be trained less frequently but more intensively. The Netherlands stands out as having both a high incidence of employee training and high hours of training per trainee.

Figure 2.3 Incidence vs. hours of training

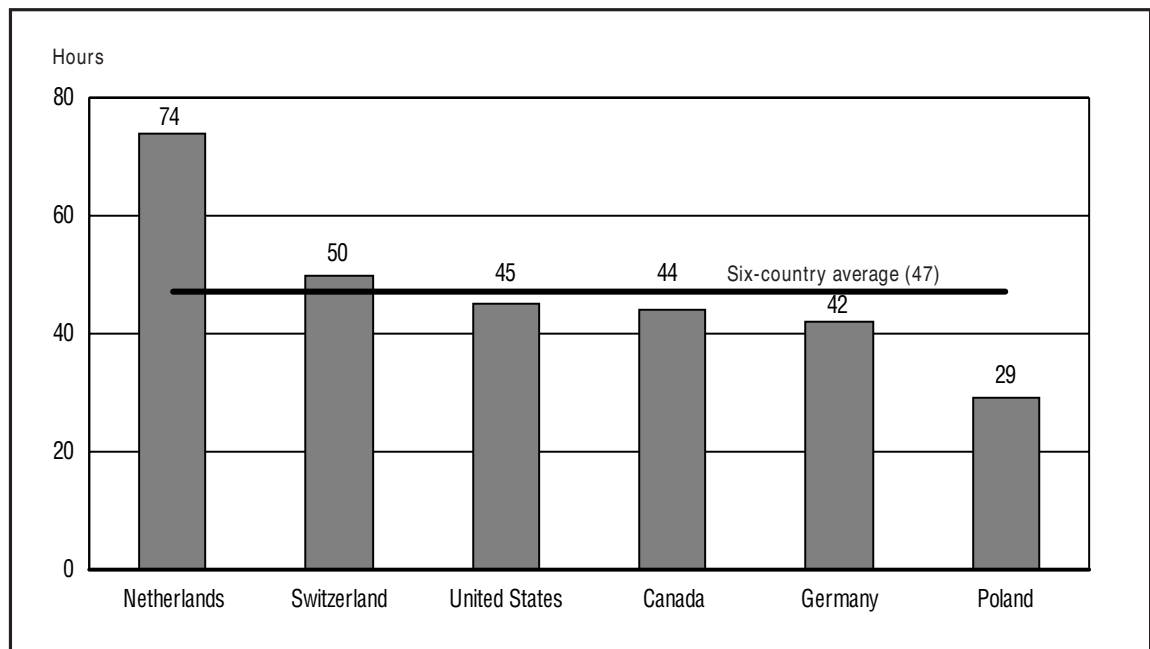


Hours of training per employee

The average employee in Canada received 44 hours of training in 1994, similar to the hours of training per employee in Switzerland, the United States and Germany (Figure 2.4). However, Canada's training effort was considerably less than the Netherlands (74 hours per employee).⁷ These comparisons are important. As it was explained earlier, the hours of training *per employee* are a comprehensive gauge of the level of training effort.

One finding of particular interest to Canadians is the virtual equality of training effort, measured in hours of training per employee, between Canada and the United States. This comparison is important for Canada because of her extensive trade links to the United States. Also, comparisons between Canada and the United States are more accurate than comparisons to other countries because of the similarity in training institutions between the two countries. By contrast, comparisons of Canada to other countries should be treated as broad indicators, rather than precise measures.

Figure 2.4 Hours of training per employee



Chapter 3

Sources of financial support

Often the debate about training focuses on employer-supported efforts and on whether employers make a sufficient investment in the training of their work force. However, a more comprehensive picture requires to look both at employer and non-employer training. Although employer-supported training may be more directly related to employees' current needs, own-supported training is more likely to be related to their future career needs, an important consideration in an environment where employees are expected to change careers more than once during their working lives.

IALS respondents were asked to identify who provided financial support for each course. The two most common answers were employer support and own support. Less frequently reported sources of financial support were governments and unions or professional organizations.

The comparisons below exclude Sweden, which did not collect information on sources of financial support, and Germany. In the case of Germany, the part of the questionnaire dealing with financial support was structured differently than in the rest of the countries, making comparisons difficult.⁸

It should be pointed out that employer- and employee-supported activities do not add up to the total. There are two main reasons for that:

- some training is supported by neither the employer or the employee but by other sources, such as government or unions; and
- the same course can be supported by more than one source.

The IALS results show that in all countries the incidence of employer-supported training was higher than the incidence of employee-supported training (Figure 3.1). At the same time, in all countries the average hours of training of employee-supported training was higher than that of employer-supported training (Figure 3.2).⁹

In terms of hours of training per employee, employer-supported training is higher than employee-supported training in all countries, particularly in the Netherlands (Figure 3.3). In similar comparisons between Canada and the United States, the differences between the two countries are fairly small. Canadian employees tend to receive somewhat more training on their own, whereas United States employees usually receive somewhat more training through their employer.

Figure 3.1 Incidence of training among employees by source of financial support

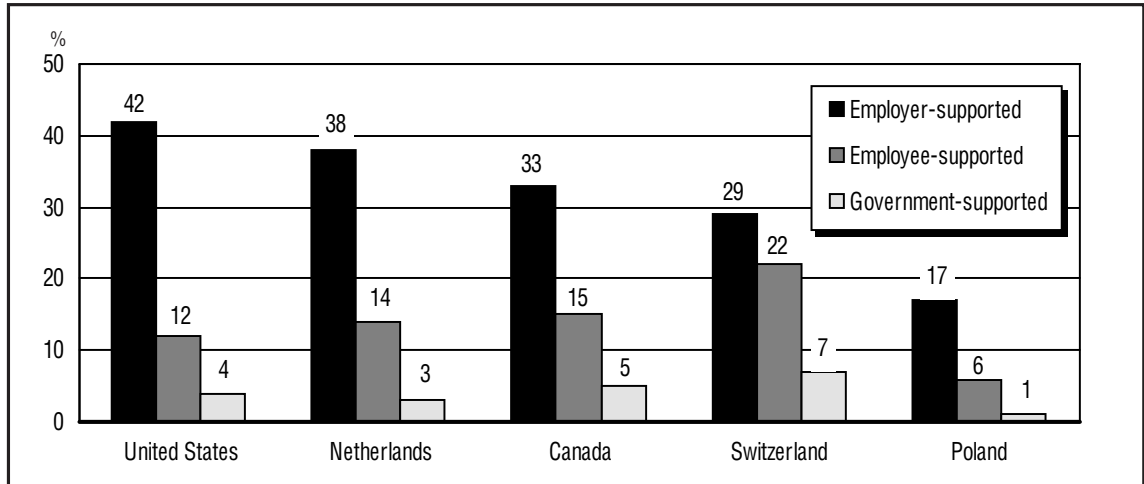


Figure 3.2 Hours of training per trainee by source of financial support

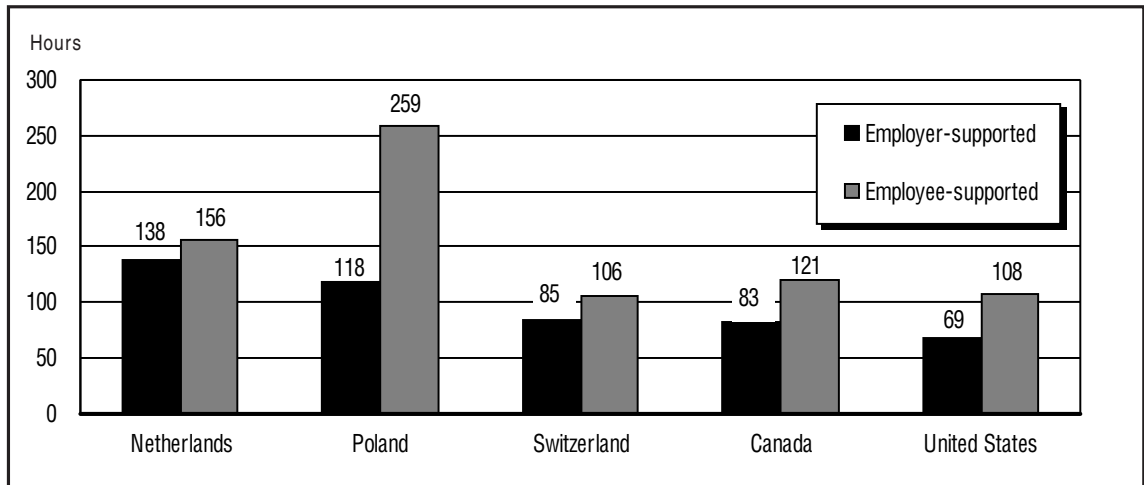
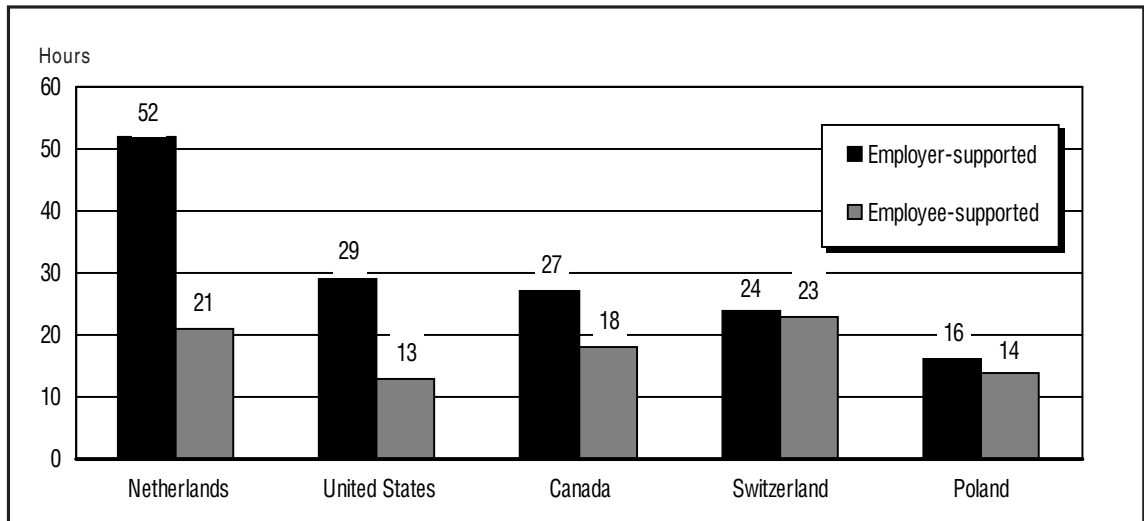


Figure 3.3 Hours of training per employee by source of financial support



Chapter 4

Training by employee characteristics

Background

An important policy issue is whether employees have equal access to training regardless of age, gender, industry, occupation or other characteristics. Comparisons of the level of training effort by employee characteristics provide an initial impression. However, to assess accessibility more adequately we also need to take into account differences in training needs.

Analysis of the training effort by employee characteristics is complicated by the fact that comparisons need to be made not only across different characteristics and different countries, but also between incidence and hours of training, as well as between employer- and employee-supported training.

This chapter focuses primarily on incidence statistics, first on the incidence of all training and then on the incidence of employer-supported training. Information on the incidence of all training is available for all countries in the survey. Information on the incidence of employer-supported training is available for all countries, except Sweden (information was not collected) and Germany (information was collected in a different way than in the rest of the countries).

Although hours of training per employee provide a more accurate gauge of training effort, this information is not available for Sweden and it is subject to high sampling variability in the case of Germany and Poland. Statistics on hours of training by employee characteristics are presented in Appendix A and only brief reference is made to these findings in the main body of the study.

Detailed findings

Figures 4.1 to 4.4 show the incidence of any education or training courses in Canada by various employee characteristics and compare them to the average for all the countries in the IALS.¹⁰ Detailed information on incidence and hours of training by country is shown in Appendix A (Tables A1 to A5).

Age

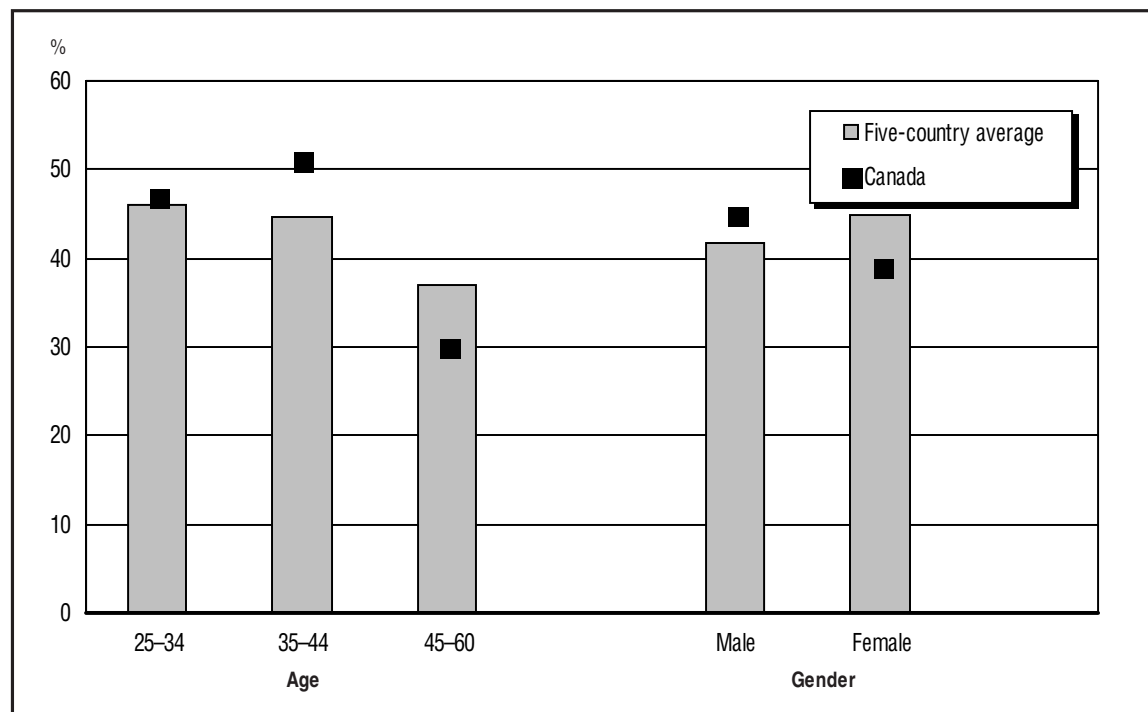
- The incidence of training was similar between the younger and middle age groups but was lower for the older age group (Figure 4.1). A similar pattern is observed in all seven countries. Also, the pattern is similar for employer- and employee-supported training. A likely explanation of the lower incidence of training among older workers may be that the need for training is also lower because of their work experience.

- The hours of training per trainee also declined with age. However, the drop was more pronounced between the younger and middle age groups.
- Canada had the most skewed age pattern of incidence of total and employer-supported training, but it had the most equal age pattern of the hours of training per trainee.

Gender

- Female employees had a higher incidence of employee-supported training than male employees in all countries (except the United States where it was the same for both genders). However, they had a lower incidence of employer-supported training (except again the United States where the incidence was the same for both genders) (Figure 4.1).
- With the exception of the Netherlands and Poland, female trainees received fewer hours of training than male trainees.
- Canada had the widest gender gap in terms of incidence of employer-supported training.¹¹ In terms of total hours of training per employee, the widest gender gap was observed in the United States and Canada.

Figure 4.1 Incidence of all training by age and gender



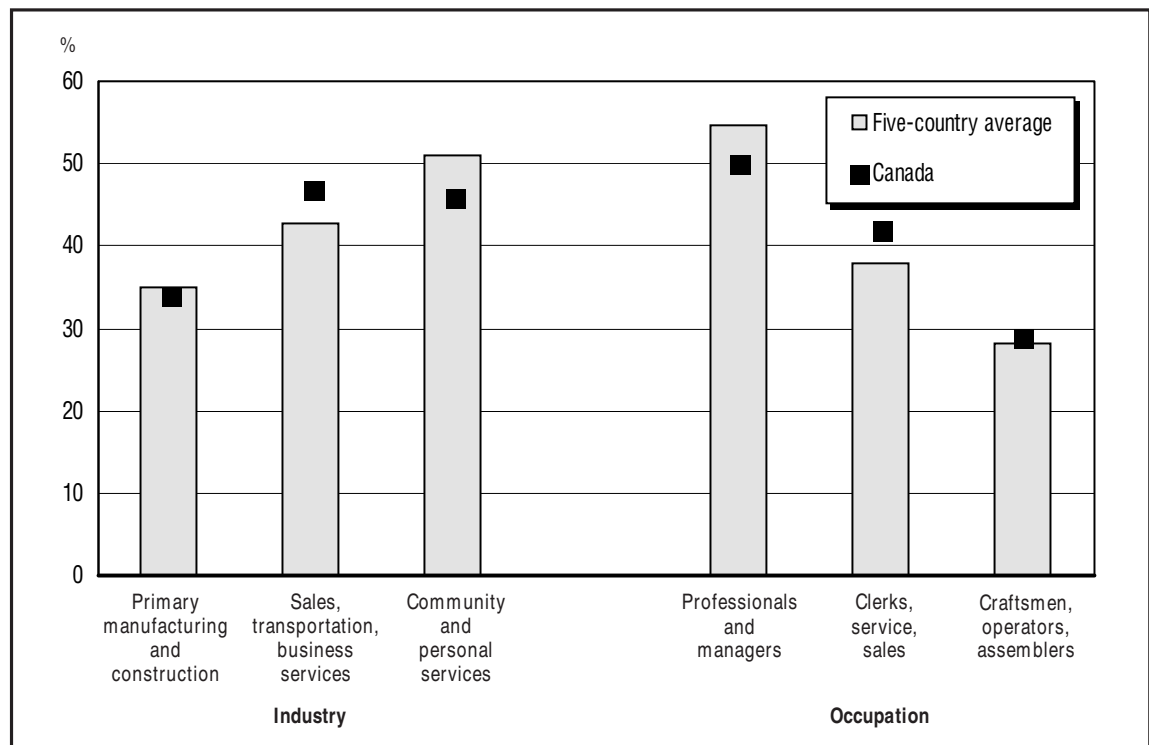
Note: Sweden and Germany are not included in the five-country average.

Industry

- Employees in goods-producing industries had the lowest incidence of training (Figure 4.2). This finding was true for both employer- and employee-supported training in all countries. It is surprising considering that most international trade is in goods rather than in services and that training is generally believed to be key to competitiveness.¹²

- The hours of training per trainee differed significantly by country. Germany had the widest gap between goods-producing industries and personal services, although this estimate is subject to wide sampling variability. As a result, Germany appears to be the only country where the hours of training per employee (which reflect both incidence and hours per trainee) were higher in the goods-producing sector than the other sectors. Germany’s training may be more strategically focused to its export needs than is the case with other countries.
- Canada, like the rest of the countries, had a lower incidence of training in the goods-producing sector. At the same time, the hours per trainee did not differ much by sector, something that was also observed in the United States.

Figure 4.2 Incidence of all training by industry and occupation



Note: Sweden and Germany are not included in the five-country average.

Occupation

- Professionals and managers had a higher incidence of training than craftsmen, operators and assemblers (Figure 4.2). This finding was true for both employer- and employee-supported training and was equally true across all countries in the survey.
- The hours of training did not follow a common pattern across countries. In Canada and the United States, the highest hours of total training was for “craftsmen, operators and assemblers.”
- Canada’s training pattern by occupation was similar to that of other countries. Interestingly the female-dominated occupations of clerks, service and sales had a higher incidence of training than the male-dominated occupations of craftsmen, operators and assemblers. However, professional and managerial occupations (which tend to be male dominated) had a higher than average incidence of training.

Size of the company

- The pattern of training by firm size was similar across all countries in the survey. Smaller firms (defined here as under 100 employees) had a relatively lower incidence of training (Figure 4.3).
- The hours of training per trainee are the same among small and large firms in both Canada and the United States. In the rest of the countries smaller firms had higher hours.
- The gap in the incidence of employer-supported training between small and large firms was narrowest in Canada and Poland and widest in the United States.

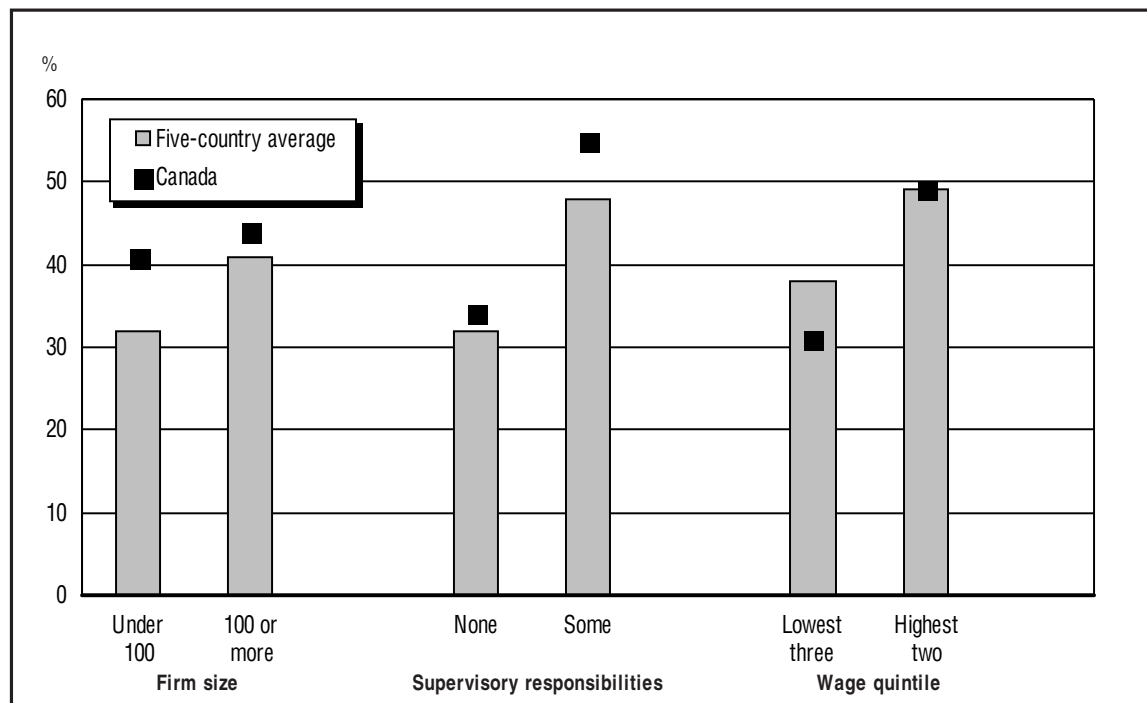
Supervisory responsibilities

- Employees with supervisory responsibilities had a higher incidence of training across all countries (Figure 4.3), whereas the hours per trainee did not differ significantly between the two groups of employees. The results are consistent with the results for professionals and managers already discussed.

Wage level

- Low-wage employees had a lower incidence of training across all countries (Figure 4.3). In addition, in Canada and the United States, low-wage employees also had a lower incidence of employee-supported training, possibly suggesting a lower need for training among low-wage earners.

Figure 4.3 Incidence of all training by size of firm, supervision and wages



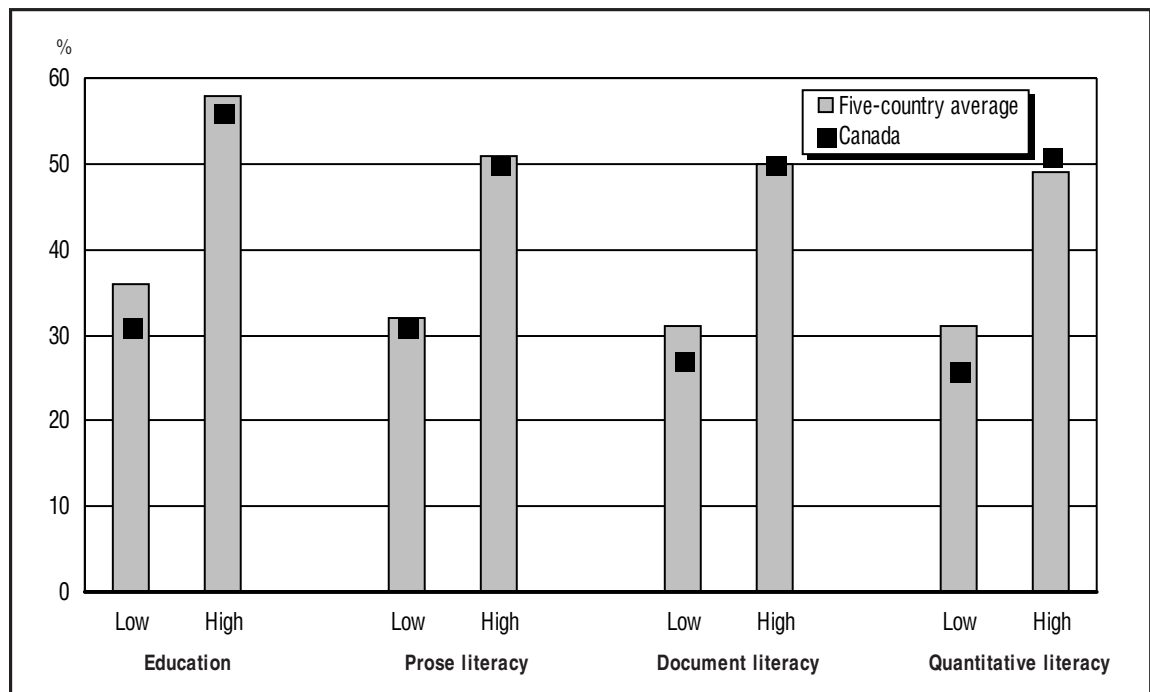
Note: Sweden and Germany are not included in the five-country average.

No information on firm size available for the Netherlands.

Education and literacy

- In all countries, a strong positive relation exists between level of education and literacy scale, on the one hand, and the incidence of training, on the other hand. Those with higher education level or literacy score also received more training, both through their employer (Figure 4.4) and on their own.
- There was no clear pattern by level of education or literacy for the hours of training per trainee. So, although the incidence of training does depend on the level of education and literacy, the intensity of training does not.
- The pattern of incidence of training by level of education and literacy in Canada was similar to that in the rest of the countries in the survey (Figure 4.4).

Figure 4.4 Incidence of all training by level of education and literacy



Note: Sweden and Germany are not included in the five-country average.

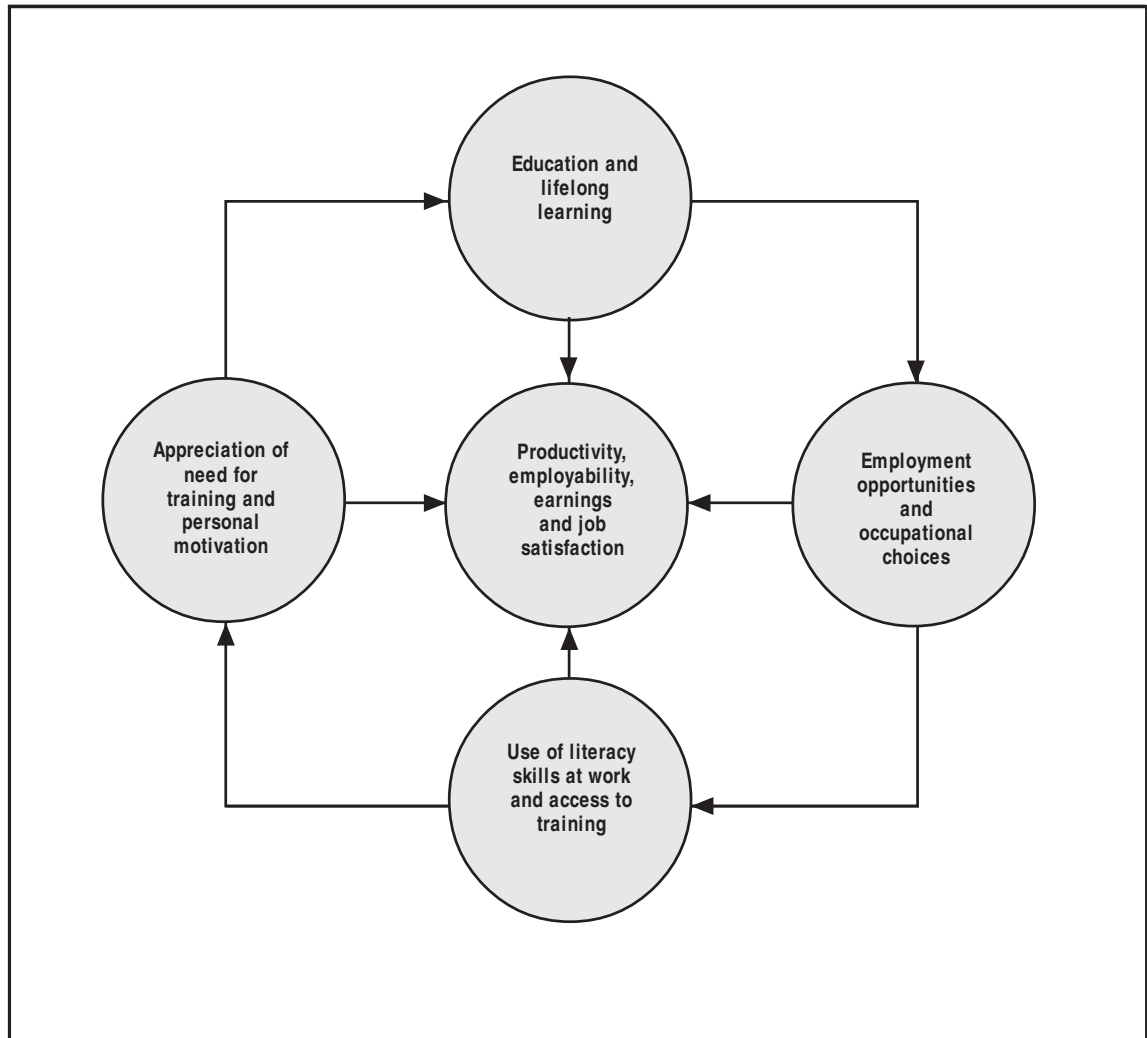
- The relation between education, literacy and training is a complex one. One can summarize this relationship in terms of the education–literacy–work virtuous cycle (Figure 4.5).

The Education–Literacy–Work Virtuous Cycle

Employees with better education and training have a better chance at getting more-skilled and better-paying jobs → This background gives them more opportunities to use their skills at work, as well as better access to employer-supported training. → More skilled jobs 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 a two-way interaction between use of literacy at work and at home.

Figure 4.5 The education–literacy–work virtuous cycle



Potential implications

One of the most interesting findings of the analysis was the similarity of the relationship between the incidence of training and employee characteristics across all the seven countries. This finding may suggest either of the following two possibilities:

- accessibility issues are similar across all the countries in the IALS; and
- the level of training effort reflects more the need for training than differences in accessibility and the need of training differs by employee characteristics.

Another interesting observation is that often those groups that had a higher incidence of employer-supported training also had a higher incidence of own-supported training. This situation was true with respect to practically all employee characteristics, particularly the level of education and literacy. It suggests that differences in employer training reflect, to at least some degree, differences in employees' perception of their need for training (Kapsalis, 1996a).

Two exceptions to the latter observation in all countries are gender and size of firm. Thus:

- although men and women had a higher incidence of own-supported training, men had a higher incidence of employer-supported training;
- similarly, although employees in small firms received more training on their own than did employees of large firms, they received less training through their employers.

In these two areas there is evidence of barriers to training in all participating countries. This issue is further analyzed later by examining perceptions of the need for more training.

Chapter 5

The desire for more training

A particularly interesting question in the IALS was the following: “Since August 1993, was there any training or education that you wanted to take for career or job-related reasons but did not?” Although subjective, this question provides a measure of the unmet demand for job-related training.

Comparisons by employee characteristics

Comparisons by employee characteristics are interesting because they shed light on the question of where the training gaps may be concentrated. A particularly interesting finding, however, is that for the most part, those characteristics that are associated with a higher incidence of training are also associated with a desire for more job-related or career training.

Two notable exceptions to the above observation are gender and size of the firm. This finding further confirms the interpretation that female employees and employees in smaller firms have less access to employee-supported training. In more detail:

- The percentage of employees who wanted more training was equally high for age groups 25–34 and 35–44 but lower for older workers (Table 5.1).
- On the other hand, the percentage of employees who wanted more training was higher for women than men, which suggests that women face more barriers than men in accessing job-related training.
- Employees with supervisory responsibilities not only received more training but also were more likely to want more training. This finding lends support to the idea that, besides barriers to training, employee demand for training is a key in determining how much training takes place.
- On the other hand, the percentage of employees wanting more training was highest among those working for small firms. Because this group of employees is associated with a below-average level of training, this finding suggests the presence of a training gap.
- Employees with higher education and literacy had a higher incidence of not only training but also of desire for more training.

Table 5.1 Percentage of employees who wanted more job-related training

	Canada	United States	Switzerland	Netherlands	Poland
			%		
Age group					
25–34	36	30	34	26	18
35–44	36	30	33	22	16
45–60	27	22	21	15	12
Gender					
Male	31	26	29	20	16
Female	35	29	31	27	15
Industry					
Goods-producing industries	27	29	29	21	12
Sales/Transportation/Business services	39	21	29	22	18
Community/Personal services	31	31	31	21	18
Occupation					
Professionals/Managers	36	34	32	24	26
Craftsmen/Operators/Assemblers	23	21	24	18	10
Clerks/Service/Sales	36	24	31	21	9
Size of company					
Under 100	43	27	31	–	14
100+	29	28	29	–	17
Job status					
No supervisory responsibilities	26	24	29	19	14
Some supervisory responsibilities	42	31	31	26	19
Wage quintile					
Lowest three quintiles	32	27	30	21	14
Highest two quintiles	32	36	31	23	19
Education					
Low: Levels 1–2	28	21	30	20	11
High: Level 3	38	35	27	27	30
Prose literacy					
Low: Levels 1–2	30	20	28	19	13
High: Levels 3–5	34	32	31	23	23
Document literacy					
Low: Levels 1–2	33	20	29	19	12
High: Levels 3–5	32	32	30	23	23
Quantitative literacy					
Low: Levels 1–2	30	21	28	19	11
High: Levels 3–5	34	31	30	23	23
Overall rate	33	27	30	22	15

– Information not collected.

Note: No information available for Sweden and Germany.

Overall comparisons

Of five countries, Canada had the highest incidence of employees who wanted more training for job-related or career reasons (34%). There are two conflicting interpretations, however:

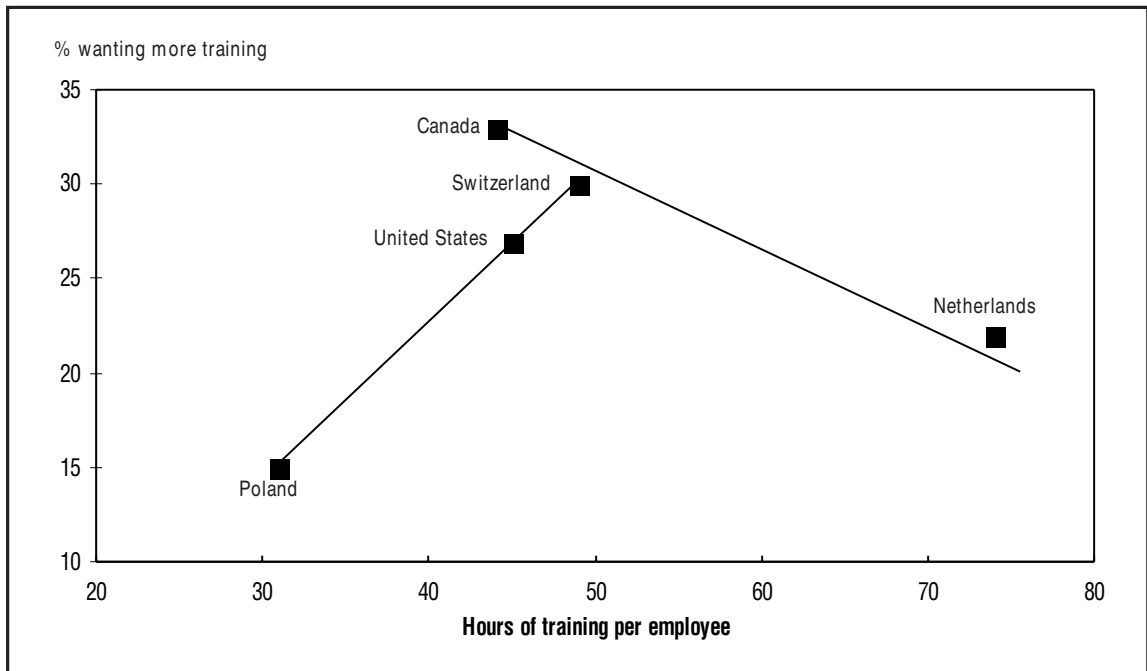
- the lower the level of training the greater the amount of unfulfilled demand for training; and
- employees who receive more training also usually want more training.

Figure 5.1 reflects the two conflicting interpretations:

- Poland had low training and low demand for more training, suggesting that there is no employee pressure for more training.
- On the other hand, the Netherlands has high training but low demand for more training relative to Canada or the United States, suggesting there is less unfulfilled demand for training.

Regardless of how we interpret this finding, we can reasonably conclude that Canadian employees are relatively more supportive of further training than is the case in the other four countries.

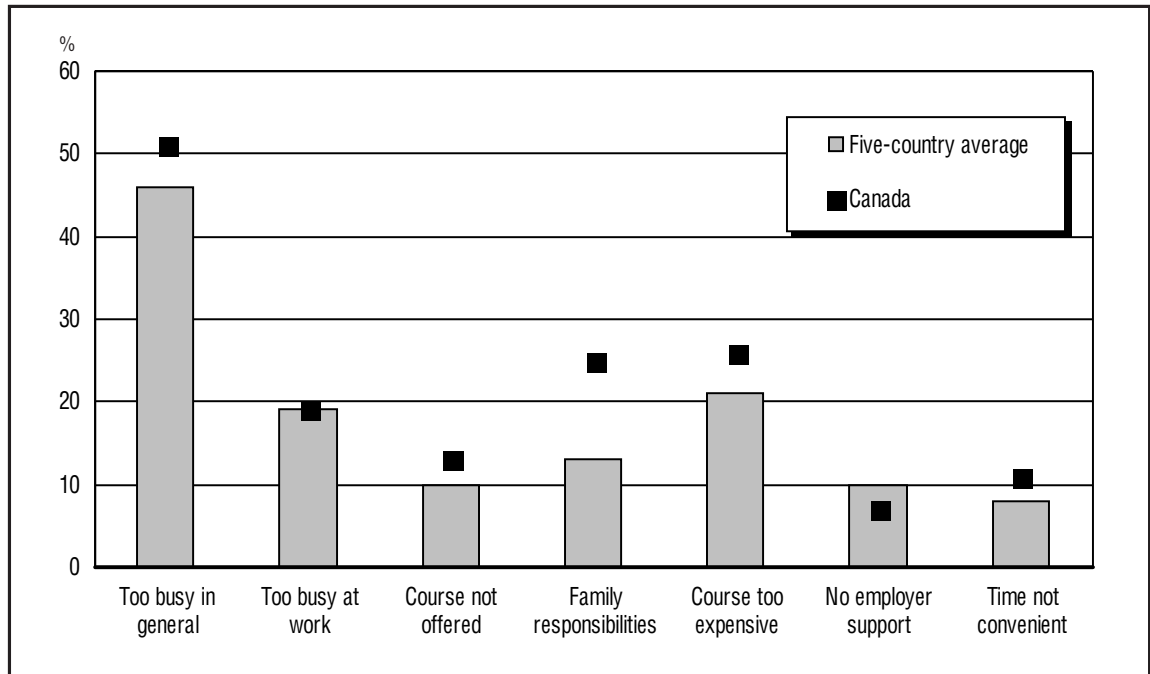
Figure 5.1 Hours of training per employee vs. employee desire for more training



Reasons for not taking more training

Although the percentage of employees who wanted to take more job-related training varies significantly by country, their reasons for not taking more training were similar across the various countries. For about 50% of employees in Canada (and the rest of the countries as a whole) their reason for not taking more training was that they were too busy in general. For about 20% the reason was that they were too busy at work (Figure 5.2).¹³

Figure 5.2 Reasons for not taking more training



Note: Sweden and Germany are not included in the five-country average.

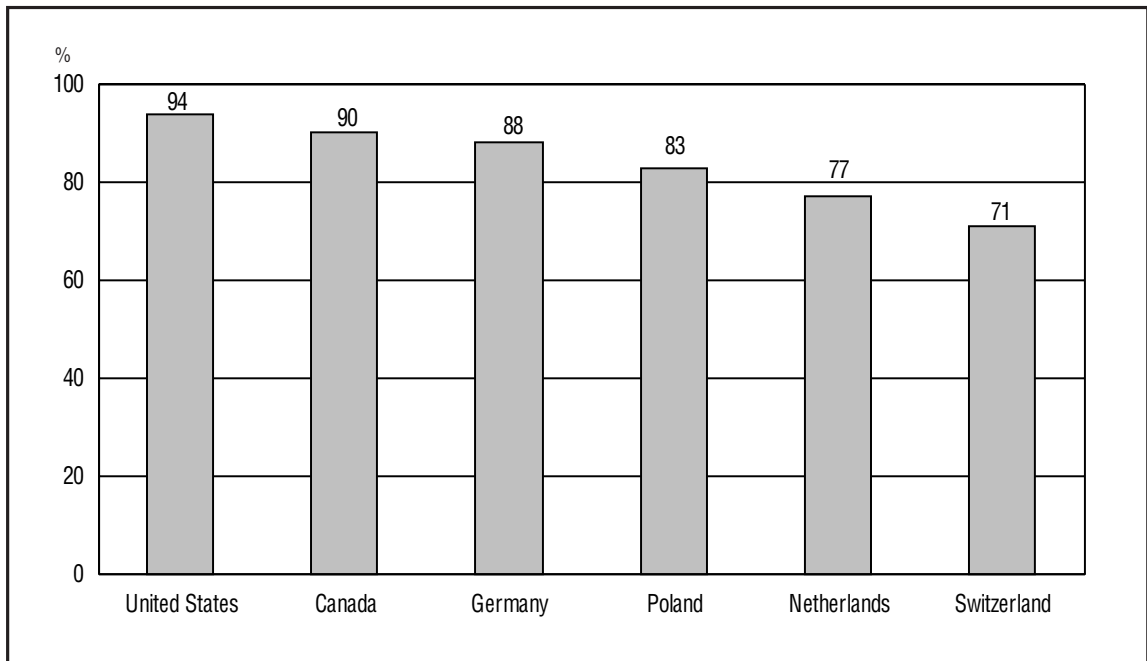
Chapter 6

Characteristics of training

Main reason for training

In most cases, the main reason employees took training was career or job related. This situation was particularly true in Canada and the United States, where 90% and 94% of trainees, respectively, took at least one training course for career- or job-related reasons (Figure 6.1). The percentage of trainees with job-related training was also high in Germany but relatively lower in the other countries. Thus, when we focus exclusively on job-related training, the gap between North America and Europe is narrower.

Figure 6.1 Percentage of trainees who took at least one career or job-related course



Use of acquired skills at work

About 66% of Canadian and United States employees who received job-related training from their employer reported that they are using their acquired skills at work to a great extent (Figure 6.2). About 25% reported making some use of these skills.

Place of training

The place of training varies widely among countries. In Canada and the United States, almost half the respondents took employer-supported training at the workplace. In Switzerland, the most common place for employer-supported training was in training centres, whereas in Poland the workplace and training centres were commonly used (Table 6.2).

In the case of non-employer-supported training, 46% of the courses in Canada were taken in public educational institutions (elementary and high schools, colleges and universities). This rate is comparable to that in the United States (43%) but is far above the rate in Switzerland and Poland. There is no information on Germany and Sweden. The Netherlands' coding was difficult to interpret.

Table 6.2 Place where training courses were taken

	Canada	United States	Switzerland	Poland
			%	
Training with employer financial support				
Public school/College campus	17	19	6	8
Commercial school/Training centre	35	32	58	37
Workplace	42	45	22	38
Home/Community centre/Other	6	4	14	18
Total	100	100	100	100
Training with no employer financial support				
Public school/College campus	46	43	12	30
Commercial school/Training centre	15	27	54	30
Home/Community centre/Other	38	30	34	40
Total	100	100	100	100

Note: No information available for Sweden.

Information for Germany not reported because the question on who supported the training was ambiguous.

Information for the Netherlands is not reported because the most common category was "elsewhere".

Training objectives

In all the countries except the Netherlands, the most common objective of employer-supported training was to upgrade the career through professional development. In Canada, the objective of 84% of all reported courses was professional upgrading (Table 6.3).

Similarly, professional upgrading was the most common objective of non-employer-supported training. However, particularly in Canada and the United States, often reported objectives were to obtain a university degree, college diploma, or trade or vocational certificate.

Table 6.3 Main objective of training courses

	Canada	United States	Switzerland	Poland
			%	
Training with employer financial support				
Professional upgrading	84	75	75	83
University or college degree	6	6	1	3
Trade or vocational certificate or apprenticeship	5	4	5	10
Other	5	15	19	5
Total	100	100	100	100
Training with no employer financial support				
Professional upgrading	46	44	40	61
University or college degree	15	26	2	11
Trade or vocational certificate or apprenticeship	16	5	10	9
Other	22	25	48	18
Total	100	100	100	100

Note: No information available for Sweden.

Information for Germany not reported because the question on who supported the training was ambiguous.

Information for the Netherlands is not reported because the most common category was "other".

Who suggested the training

An interesting finding of the analysis is that employer-supported training is commonly suggested by the employee. In Canada, for example, 29% of the employer-supported courses were suggested by the employee alone; another 15% were suggested by both the employee and the employer (Table 6.4).

These results demonstrate that employees have more influence on employer-supported training decisions than is generally believed. They also suggest that promoting employer-supported training is not solely the responsibility of the employer but also of the employees.¹⁴

Table 6.4 Who suggested the training courses

	Canada	United States	Switzerland	Netherlands	Poland
			%		
Training with employer financial support					
Employer	54	62	40	61	59
Employee or family	29	23	29	28	20
Both employer and employee	15	11	30	5	13
Other	3	5	2	6	8
Total	100	100	100	100	100
Training with no employer financial support					
Employer	4	20	6	9	20
Employee or family	81	73	84	85	63
Both employer and employee	8	3	7	0	10
Other	7	4	4	6	7
Total	100	100	100	100	100

Note: No information available for Sweden.

Information for Germany not reported because the question on who supported the training was ambiguous.

Chapter 7

Conclusions

The IALS provides a unique opportunity for assessing Canada's training record relative to that of other countries. Relative to other countries, Canada stands out for the high level of education of its work force, but its training effort is only average.

Canada's strong education record provides the essential prerequisite for promoting training and strengthening competitiveness. The fact that a high percentage of Canadian employees desire more job-related training is evidence that Canada is a fertile ground for further emphasis on training.

Employers can play an important role in promoting training. However, educational institutions will have to play a greater role as well. A growing share of the labour force are self-employed or contingent employees and typically do not benefit from employer-supported training. Moreover, employer-supported training is usually geared to present job requirements, whereas much of the demand for training is driven by individuals' need to acquire skills for new jobs.

Endnotes

1. Also, most likely, Canada's training effort was less than Sweden's. Sweden had the highest incidence of training. However, there is no information on hours of training to provide a complete assessment of Sweden's training effort.
2. Initially, we excluded from the sample only those who worked part-time because they were students. However, we found unusually high hours of own-supported training among youth and part-time workers (especially in Canada). This finding suggested that many students were still included in the sample who either worked full time, or worked part time but simply did not report going to school as a reason.
3. Full-time work is defined as 30 or more hours per week.
4. In Canada, for example, 86.5% of employees aged 25–60 worked full time.
5. The incidence of training is a “flow” concept. Unlike the case of education, which is a “stock” concept and is measured at a point in time, the incidence of training depends on the length of time over which it is measured.
6. Unlike the rest of the countries, the Swedish sample includes the self-employed because it was not possible to exclude them. However, the effect is probably negligible because for the rest of the countries the incidence of training was virtually the same whether the self-employed were included or not.
7. Also, most likely, Canada's training effort was less than Sweden's. Sweden had the highest incidence of training. However, there is no information on hours of training to provide a complete assessment of Sweden's training effort.
8. The question on financial support in the German questionnaire was preceded by a filter question as to whether there were any financial costs involved or not. A high percentage of German employees responded that there were no financial costs and their responses were classified in the “no fees” category. As a result, the “no fees” category in Germany accounted for a much larger percentage of responses than in other countries, making comparisons questionable.
9. The average hours of government training are not reported because, as a result of sample limitations, the estimates are not reliable.
10. The average here is simply the unweighted arithmetic mean of the seven countries in the IALS.
11. This finding deserves more detailed analysis, similar in nature to the analysis of the wage differential between male and female employees.
12. At face value, the above finding seems to question the presence of a link between exports and training. This finding deserves more detailed analysis.
13. Responses do not add up to 100% because respondents identified more than one reason for not taking additional training.
14. For a more detailed discussion of this point in the context of Canada, *see* “The Role of Employees in Training Decisions in Canada,” Kapsalis, 1996a.

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Appendix A

Detailed tables

Table A.1 Incidence of all training among employees

	Canada	United States	Switzerland	Netherlands	Sweden	Poland	Germany
	%						
Age group							
25–34	47	53	54	54	62	27	26
35–44	51	54	48	48	64	24	24
45–60	30	52	37	41	61	20	20
Gender							
Male	45	51	46	47	59	23	21
Female	39	54	48	54	67	25	29
Industry							
Goods-producing industries	34	41	36	42	55	17	18
Sales/Transportation/Business services	47	50	50	47	57	29	19
Community/Personal services	46	64	57	57	71	30	32
Occupation							
Professionals/Managers	50	71	59	56	72	42	32
Craftsmen/Operators/Assemblers	29	27	31	39	45	13	14
Clerks/Service/Sales	42	49	38	42	53	17	25
Size of company							
Under 100	41	39	38	–	–	23	19
100+	44	59	52	–	–	25	27
Job status							
No supervisory responsibilities	34	43	42	45	–	21	8
Some supervisory responsibilities	55	64	54	54	–	34	26
Wage quintile							
Lowest three quintiles	31	53	36	44	58	19	24
Highest two quintiles	49	70	55	52	64	31	25
Education							
Low: Levels 1–2	31	37	42	45	57	18	20
High: Level 3	56	71	64	61	73	44	34
Prose literacy							
Low: Levels 1–2	31	33	32	37	51	20	17
High: Levels 3–5	50	65	59	55	66	36	28
Document literacy							
Low: Levels 1–2	27	37	33	36	50	20	13
High: Levels 3–5	50	64	56	54	65	35	28
Quantitative literacy							
Low: Levels 1–2	26	37	31	33	51	18	19
High: Levels 3–5	51	62	54	54	65	34	24
All employees	43	53	46	48	62	24	23

– Information not collected.

Note: Swedish figures include the self-employed.

Table A.2 Incidence of employer-supported training among employees

	Canada	United States	Switzerland	Netherlands	Poland
			%		
Age group					
25–34	35	41	31	41	18
35–44	40	44	28	40	18
45–60	25	42	27	33	16
Gender					
Male	36	42	30	39	18
Female	28	42	26	35	16
Industry					
Goods-producing industries	26	33	22	33	14
Sales/Transportation/Business services	38	40	32	38	22
Community/Personal services	34	51	33	44	19
Occupation					
Professionals/Managers	41	57	39	45	27
Craftsmen/Operators/Assemblers	21	20	18	31	11
Clerks/Service/Sales	29	39	20	29	14
Size of company					
Under 100	27	26	21	–	15
100+	35	49	35	–	20
Job status					
No supervisory responsibilities	24	33	23	35	14
Some supervisory responsibilities	46	53	38	43	29
Wage quintile					
Lowest three quintiles	23	40	20	31	13
Highest two quintiles	38	60	36	44	24
Education					
Low: Levels 1–2	23	29	26	35	15
High: Level 3	45	57	41	49	27
Prose literacy					
Low: Levels 1–2	24	25	21	28	15
High: Levels 3–5	38	52	36	43	24
Document literacy					
Low: Levels 1–2	18	28	21	26	15
High: Levels 3–5	40	52	35	43	24
Quantitative literacy					
Low: Levels 1–2	20	28	17	21	13
High: Levels 3–5	40	51	35	44	25
All employees	33	42	29	38	17

– Information not collected.

Note: No information available for Sweden.

German information not comparable to the rest of the countries.

Table A.3 Incidence of employee-supported training among employees

	Canada	United States	Switzerland	Netherlands	Poland
			%		
Age group					
25–34	22	14	31	19	10
35–44	17	11	24	11	5
45–60	8	12	12	8	3
Gender					
Male	15	12	19	10	5
Female	16	12	29	25	8
Industry					
Goods-producing industries	8	9	16	10	2
Sales/Transportation/Business services	17	10	24	13	6
Community/Personal services	19	16	28	18	12
Occupation					
Professionals/Managers	21	19	28	16	15
Craftsmen/Operators/Assemblers	8	4	12	8	1
Clerks/Service/Sales	12	8	22	14	3
Size of company					
Under 100	19	14	21	–	8
100+	14	11	23	–	4
Job status					
No supervisory responsibilities	13	11	23	14	6
Some supervisory responsibilities	19	14	22	13	6
Wage quintile					
Lowest three quintiles	14	12	22	17	6
Highest two quintiles	17	19	22	11	7
Education					
Low: Levels 1–2	7	5	21	12	3
High: Level 3	24	20	28	18	19
Prose literacy					
Low: Levels 1–2	13	5	14	9	4
High: Levels 3–5	17	16	30	16	14
Document literacy					
Low: Levels 1–2	9	6	14	11	3
High: Levels 3–5	18	16	28	14	14
Quantitative literacy					
Low: Levels 1–2	10	6	14	11	4
High: Levels 3–5	18	16	26	14	11
All employees	15	12	22	14	6

– Information not collected.

Note: No information available for Sweden.

German information not comparable to the rest of the countries.

Table A.4 Hours of training per trainee

	Canada	United States	Switzerland	Netherlands	Poland	Germany
Age group						
25–34	118	136	137	189	215*	316*
35–44	95	73	79	143	134*	100*
45–60	96	59	94	107	100*	110*
Gender						
Male	106	100	119	144	135*	219*
Female	99	70	94	185	184*	103*
Industry						
Goods-producing industries	112	84	125	126	126*	325*
Sales/Transportation/Business services	100	85	101	137	85*	141*
Community/Personal services	103	88	96	192	206*	63*
Occupation						
Professionals/Managers	98	85	110	174	192	94*
Craftsmen/Operators/Assemblers	121	101*	109*	111*	125*	—
Clerks/Service/Sales	106	81	111	138*	82*	132*
Size of company						
Under 100	104	88	125	—	174*	210*
100+	105	85	106	—	129*	168*
Job status						
No supervisory responsibilities	96	83	113	153	164	—
Some supervisory responsibilities	111	89	107	155	142*	180*
Wage quintile						
Lowest three quintiles	107	86	118*	145	182*	—
Highest two quintiles	94	90	101	149	142	210*
Education						
Low: Levels 1–2	93	78	101	159	135	204*
High: Level 3	112	91	132	144	185*	95*
Prose literacy						
Low: Levels 1–2	112	85	83	146	152	252*
High: Levels 3–5	101	87	123	157	164*	145
Document literacy						
Low: Levels 1–2	117	91	88	123*	155	267*
High: Levels 3–5	100	84	119	162	159*	159
Quantitative literacy						
Low: Levels 1–2	99	94	95	119*	150*	266*
High: Levels 3–5	105	83	114	162	163*	157
All trainees	104	86	110	154	157	181

— Information not available.

— Fewer than 30 trainees in the cell.

* 30 to 99 trainees in the cell.

Note: No information available for Sweden.

Table A.5 Hours of training per employee

	Canada	United States	Switzerland	Netherlands	Poland	Germany
Age group						
25–34	55	72	73	102	47*	81*
35–44	49	39	36	68	25*	24*
45–60	29	30	34	44	15*	22*
Gender						
Male	48	51	53	67	26*	46*
Female	38	37	45	100	33*	30*
Industry						
Goods-producing industries	38	35	43	53	18*	59*
Sales/Transportation/Business services	46	43	51	65	18*	27*
Community/Personal services	47	56	53	110	46*	20*
Occupation						
Professionals/Managers	49	60	64	97	60	30*
Craftsmen/Operators/Assemblers	35	28*	33*	43*	15*	—
Clerks/Service/Sales	44	39	41	58*	10*	33*
Size of company						
Under 100	42	35	46	—	31*	40*
100+	46	50	54	—	25*	45*
Job status						
No supervisory responsibilities	33	36	46	69	27	—
Some supervisory responsibilities	61	56	57	84	37*	46
Wage quintile						
Lowest three quintiles	33	45	41*	64	28*	—
Highest two quintiles	46	62	55	78	35	52
Education						
Low: Levels 1–2	29	29	41	71	18	41*
High: Level 3	63	64	83	87	66*	33*
Prose literacy						
Low: Levels 1–2	35	28	26	54	24	43*
High: Levels 3–5	50	56	72	86	45*	41
Document literacy						
Low: Levels 1–2	32	34	28	44*	24	35*
High: Levels 3–5	50	53	66	87	43*	45
Quantitative literacy						
Low: Levels 1–2	26	35	28	39*	21*	50*
High: Levels 3–5	54	52	61	88	43*	38
All trainees	44	45	50	74	29	42

— Information not available.

— Fewer than 30 trainees in the cell.

* 30 to 99 trainees in the cell.

Note: No information available for Sweden.

International Adult Literacy Survey

Monograph Series

The International Adult Literacy Survey (IALS) was a seven-country initiative conducted in the fall of 1994. Its goal was to create comparable literacy profiles across national, linguistic and cultural boundaries. Successive waves of the survey now encompass close to 30 countries around the world.

The Monograph Series features detailed studies from the IALS database by literacy scholars and experts in Canada and the United States. The research is primarily funded by Human Resources Development Canada. Monographs focus on current policy issues and cover topics such as adult training, literacy skill match and mismatch in the workplace, seniors' literacy skills and health, literacy and economic security, and many others.

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