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International Adult Literacy Survey

The Value of Words: Literacy and Economic Security in Canada

Vivian Shalla and Grant Schellenberg

Centre for International Statistics at the Canadian Council on Social Development

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.

Published by authority of the Minister responsible for Statistics Canada

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May 1998

Catalogue no. 89-552-MPE, no. 3

ISSN 1480-1566

ISBN 0-660-17523-1

Catalogue no. 89-552-MIE, no. 3

ISSN 1480-9516

Frequency: Irregular

Ottawa

Statistics Canada

Human Resources Development Canada

National Literacy Secretariat

Opinions are those of the author and do not necessarily reflect those of the granting agencies or reviewers.

Canadian Cataloguing in Publication Data

Shalla, Vivian

The value of words : literacy and economic
security in Canada

(International Adult Literacy Survey)

Co-published by: Human Resources Development Canada

[and] National Literacy Secretariat.

Issued also in French under title: La valeur des mots : alphabétisme et
sécurité économique au Canada.

Available also on the Internet.

ISBN 0-660-17523-1

CS89-552-MPE no. 3

I. Literacy – Economic aspects – Canada. I. Schellenberg, Grant, 1962-
II. Statistics Canada. III. Canada. Human Resources Development Canada.
IV. Canada. National Literacy Secretariat. V. Series.

LC154 S34 1998
C98-988011-7

302.2'244

Note of Appreciation

Canada owes the success of its statistical system to a long-standing co-operation involving Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued co-operation and goodwill.

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Introduction

The incidence of poor literacy skills has long been recognized as a major problem for developing countries (Adiseshiah 1990; Tanguiane 1990; UNESCO 1990). Until relatively recently, however, there was little public awareness of the literacy problems of adults in industrialized countries and of the consequences of poor literacy skills for societal and individual economic success (Limage 1990; Vélis 1990). Adult literacy is increasingly understood to be fundamental to industrialized nations' economic performance, and also to individuals' social and economic well-being, especially in the context of rapid social and economic change (DesLauriers 1990; OECD 1992; Kirsch, Jungeblut, Jenkins and Kolstad 1993; OECD and Statistics Canada 1995; Statistics Canada and Human Resources Development Canada 1996; Bloom, Burrows, Lafleur and Squires 1997).

The past two decades have seen a massive and profound transformation and restructuring of economic activities worldwide. In Canada, a new labour market polarization has emerged, featuring growth in both highly skilled, well-paid and secure jobs and low-skilled, poorly paid and unstable jobs (Economic Council of Canada 1990; Osberg, Wien and Grude 1995). This polarization, as well as persistently high levels of unemployment and rising economic insecurity, are fundamental features of the new economy.

These rapid, complex changes present society and individuals with unprecedented challenges. It is widely argued that success in the job market is increasingly based on people's ability to respond to economic restructuring by acquiring and developing skills, including literacy skills. Strong literacy skills are also deemed to be fundamental to people's adaptability and flexibility in the new information economy, and crucial for improving their employment and income prospects and reducing the risk of becoming economically disadvantaged (OECD and Statistics Canada 1995; Clark 1996; Stevens 1996).

Literacy skills are doubtless important, but it is becoming abundantly clear that the processes by which individuals acquire, maintain and enhance literacy, and other skills, occur within a socio-economic context rife with inequality. Inequality of opportunity creates an environment conducive to unequal outcomes. This has long-term consequences for societies and individuals, because families' economic well-being and literacy affect how their children face the future—the outcomes of one generation lay the foundation for the conditions and opportunities of the next. Negative outcomes such as economic insecurity and poor literacy skills doubly jeopardize individuals' life conditions, and render their choice-making more problematic. Moreover, both economic insecurity and marginal literacy skills can limit people's opportunities to participate in democratic society, hindering social cohesion and exacerbating social exclusion.

Canada, like many other industrialized countries, is increasingly being forced to face the literacy problem within its own borders. Over the past decade, the issue has become more prominent on the national policy and research agenda. There has been little systematic research in Canada, however, on the relationship between literacy and economic security. Using data from the Canadian component of the International Adult Literacy Survey (IALS),¹ this study seeks to fill this research gap. An in-depth exploration of the links between literacy and economic security will build on existing knowledge and will also provide useful insights that will help shape public policy.

The study is divided into three chapters. The first examines the relationship between literacy and economic security or well-being (expressed in different measures of income), taking into account the mediating effects of the labour market. The analysis suggests that literacy skills do have an influence on labour market status as well as on earnings, income, and the risk of becoming economically disadvantaged. The findings point to a strong link between literacy skills and labour market success. However, when gender is taken into account, the relationship between literacy skills and labour market outcomes is less clear.

The second chapter explores the link between economic security and the practices of literacy. A focus on practices is important because literacy skills are not static, but are sustained and strengthened through continuing education, training and other forms of practice. Our findings suggest that adults living in low-income households engage relatively less in practices that would help develop their literacy abilities, both on and off the job.

In the third chapter, we explore the relationship between parents' economic security and their literacy-enhancing practices and activities, as well as those of their children. The analysis shows a connection between household economic status and intergenerational literacy. Economically disadvantaged parents and children tend to participate somewhat less in literacy-enhancing activities than those who are better off.

Methodological note

The relationship between literacy and economic disadvantage is a central focus of this report; a brief note on how each is measured is warranted.

The IALS² defined literacy as the ability to understand and use printed and written information to function in society, to achieve goals, and to develop knowledge and potential. Three types of literacy were measured by the IALS: prose, document and quantitative. They were defined as follows:

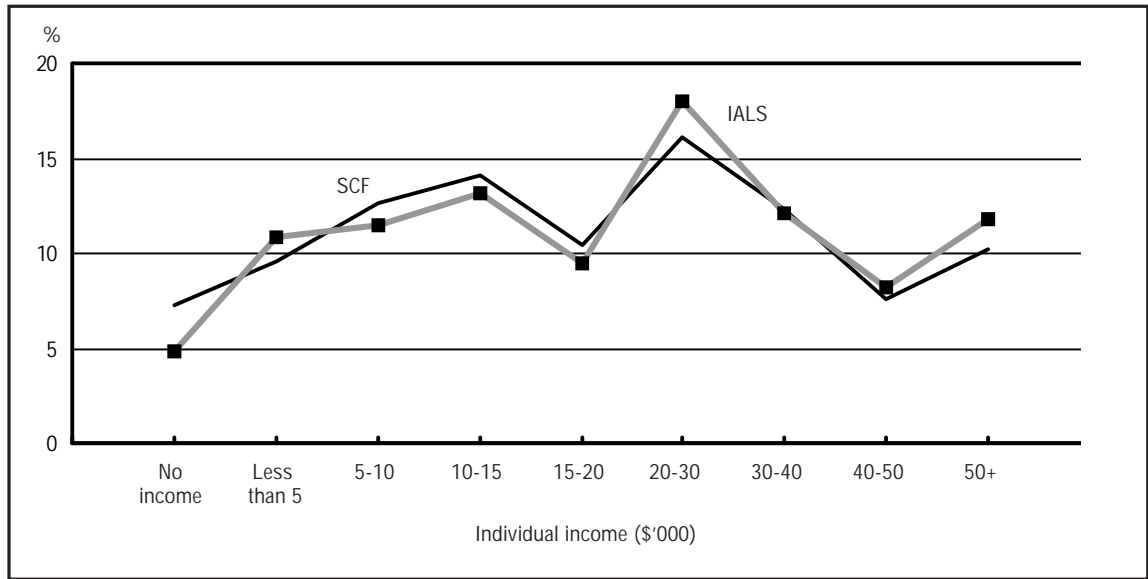
- *Prose literacy*: The ability to understand and use information from texts such as editorials, news stories, poems and fiction.
- *Document literacy*: The ability to locate and use information from documents such as job applications, payroll forms, transportation schedules, maps, tables and graphs.
- *Quantitative literacy*: The ability to perform arithmetic functions such as balancing a chequebook, calculating a tip, or completing an order form.

Based on the results of tests administered as part of the survey, respondents were classified into one of five levels for each type of literacy; Level 1 was the lowest and Level 5 the highest. Because of the small proportion of individuals at Level 5, Levels 4 and 5 have been combined.³

A common statistical measure of income adequacy in Canada is Statistics Canada's low income cut-offs (LICOs). These cut-offs are determined by the proportion of total income an average Canadian family spends on food, clothing and shelter. Statistically, a family is considered to be low income if it spends significantly more (at least 20 percentage points more) of its income on these three essentials than the average Canadian family. Statistics Canada identifies families with incomes below the LICOs as living in "straitened circumstances." In this study, those living in households with incomes that fall below the LICO are defined as economically disadvantaged or low income.

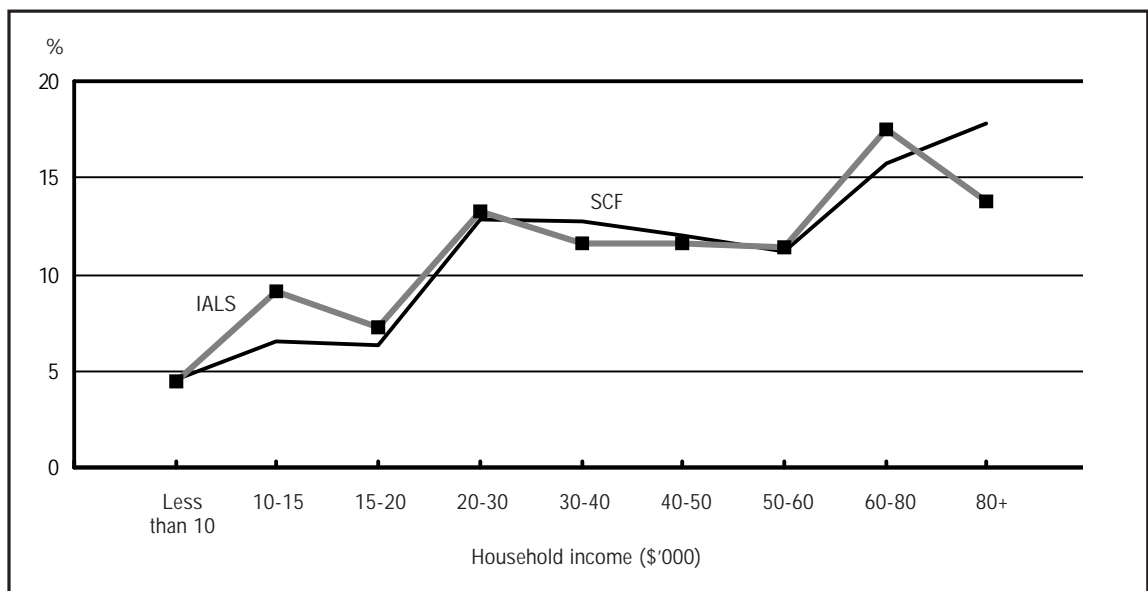
In most studies of income adequacy, the unit of analysis is the *economic family*. An economic family is "a group of individuals sharing a common dwelling unit who are related to each other by blood, marriage or adoption." This concept is used because it is assumed that financial resources are shared between family members living together. However, in the IALS, income information is not available for economic families, but for individuals and the households in which they live. The definition of *household* is broader than that of *economic family*, because households include non-relatives living in the dwelling. As a result, household incomes will tend to be somewhat higher than economic family income, possibly due to the contributions of non-relatives. However, the effect is slight because, in 96% of cases, the households surveyed also fit the definition of an economic family.⁴

Figure I.1 Distribution of individuals by total personal income: A comparison of the IALS and the SCF



Household income is central to our analysis. Thus, the high rate of non-response to income questions on the IALS is a concern. About one-third (34%) of respondents did not give information on household income, and 19% of respondents did not give information on individual income. So there is reason to question whether findings based on the income variables are reliable and representative of the general population. To assess the extent of possible bias, we have compared the income distribution from the IALS to that of the Survey of Consumer Finances (SCF).⁵ It should be noted that some SCF respondents also did not respond to income questions, although Statistics Canada imputes incomes for non-respondents and addresses the issue of response bias. As shown in Figure I.1, there is no appreciable difference in the distribution of personal income between the IALS and the SCF, suggesting that non-response in the IALS is not likely to cause biased results.

Figure I.2 Distribution of individuals by total household income: A comparison of the IALS and the SCF



The income of the households in which individuals resided was also compared. As shown in Figure I.2, there appears to be some overrepresentation of IALS respondents in lower-income households relative to the SCF. For example, 21% of IALS respondents resided in households with incomes under \$20,000, compared with 17% of SCF respondents. This difference is reflected in the low-income rates derived from the two surveys. The low-income rate among all non-elderly individuals (those aged 16 to 64) was 20% based on the IALS, compared with 16% based on the SCF. The discrepancy was far larger among the elderly population (those 65 and over). A low-income rate of 37% was found among all elderly individuals using the IALS, compared with 19% using the SCF. Because of the size of this discrepancy and the limitations of sample size in the IALS, our analysis is predominantly limited to working-age individuals—those between 16 and 64.⁶

All results published in this report meet Statistics Canada's release guidelines (Statistics Canada 1996, p. 74). However, in many cases the sample size underlying the estimates for persons from low-income households are small, and are suitable only for qualified release. This means that results should be interpreted with caution given the level of error associated with the estimates. Where sample sizes are too small to provide reliable estimates, the symbol “...” is used. All tables and charts in this report have been produced by the authors using the IALS public use microdata file.

Chapter 1

Literacy, economic security and the labour market

While more and more arguments are being made that literacy skills are crucial to individuals' economic success, there is still limited knowledge and understanding of the connection between literacy and economic security, and how the labour market mediates this relationship. The need to further explore these links is even more pressing, given the economic restructuring taking place worldwide, the resulting dislocations in national labour markets and the advent of the information-based economy, all of which can affect families' and individuals' economic security. These global structural changes are also having a profound impact on the nature of skills required to achieve economic security.

Growing interest in uncovering and understanding the connections between literacy skills and labour market and economic success has brought to the fore the debate on income and earnings disparities and labour market inequalities. The literature on income and earnings differentials has been dominated by human capital theory. It postulates that individuals receive unequal rewards from the labour market because of the different investments they make in their own human capital. By bringing to the labour market different levels of education, skills, training and experience, individuals achieve substantially different levels of pay, benefits, job security and occupational status (Hunter 1986; Mok 1996). An impressive body of research presents strong evidence demonstrating that better-educated and higher-skilled labour market participants are more likely to hold well-paying, higher-status jobs and less likely to be unemployed or hold a low-paying job (Statistics Canada 1994, 1997; Barr-Telford, Bowlby and Clark 1996).

While this evidence is compelling, human capital theory has not been able to fully account for the fact that some groups in society are less likely than others to reap the benefits of investments in their human capital. The labour market segmentation perspective was developed in an attempt to resolve this contradiction in the human capital model, and to better explain unequal labour market outcomes. The basic tenet of labour market segmentation theory is that there is not a single, homogeneous, open labour market, but rather a market divided into segments where the processes of securing employment differ markedly and where the rewards are unequal (Clairmont and Apostle 1986; Rubery 1988). This theory has been particularly influential in efforts to understand earnings disparities between women and men. Several studies have demonstrated that the female-male earnings gap cannot be satisfactorily explained by differences in market endowments such as education, skills and training. They see the gender-segregated structure of the labour market as a major factor accounting for inequalities between women's and men's earnings (Guppy 1989; Hughes and Lowe 1993; Davies, Mosher and O'Grady 1996; Raudenbush 1996).

Because paid employment is the main income source for most individuals and families, the rewards derived from the labour market largely determine people's living standards, long-term prospects and quality of life. Skills do play an important role in shaping the nature of individuals' participation in the labour market, as does the segmented nature of this market. The current restructuring of the labour market, characterized by a changing mix of jobs and a polarization of jobs, is forcing a shift in skills requirements. Despite this transformation in the skills mix, literacy remains a crucial foundation skill upon which many other skills are built. Given the oft-stated

argument that excellence in literacy is key to adaptability and success in the information-based economy, it is important to investigate how literacy skills and economic rewards are linked.

Literacy and economic disadvantage

An analysis of the IALS data establishes a strong link between economic security and literacy. Working-age adults with weaker literacy skills were far more likely to be living in low-income households than those with stronger literacy skills. For example, nearly half (47%) of adults at the lowest level of literacy on the prose scale were living in low-income households, compared with only 8% of those at the highest level of literacy (see Table 1.1). The risk of living in a low-income household was thus six times greater for individuals at Level 1 than for those at Level 4/5. The likelihood of living in a low-income household decreased significantly as the level of literacy increased. Moreover, the rewards associated with being able to perform at even one level above the lowest level of proficiency were very real for working-age adults; their risk of income inadequacy was reduced from 47% to 22%. Clearly, there are penalties and rewards associated with different levels of literacy proficiency.

Table 1.1 Incidence of low income (percentage of individuals residing in low-income households), by level of prose literacy and sex, Canada, 1994

Prose scale	Working-age adults (%)		
	All	Men	Women
Level 1	47	40	59
Level 2	22	16	29
Level 3	16	11	22
Level 4/5	8	...	...

... Sample size too small to provide reliable estimate.

While literacy and economic security are intertwined, a closer examination of this relationship reveals both similarities and troubling disparities between women and men of working age. For both groups, the risk of living in low-income households decreased as literacy skills increased. The decrease, however, was more rapid for men than for women. In addition, at each literacy level, women were more likely than men to be living in low-income households (although the sample size for Level 4/5 was too small to produce reliable estimates). For example, 59% of women performing at Level 1 came from low-income households compared with 40% of men. At both Levels 2 and 3, women's risk of income inadequacy was roughly twice that of men's. The more precarious economic situation of women may be due to their particular position in the labour market and their greater likelihood of being unpaid homemakers; women may also gain less than men from investing in their literacy skills.

These patterns are not unique to proficiencies on the prose scale. When document and quantitative literacy are examined, the relationship between literacy and income inadequacy is similar. However, the proportion of men living in low-income homes was higher at Level 1 on both the document and quantitative scales than on the prose scale, while it was lower for women (see Appendix Tables 1a and 1b). As a result, the gap in the low-income rate between women and men was much narrower.

The data suggest that many working-age adults with lower literacy skills, be they women or men, are unable to secure enough income to avoid economic disadvantage. The strong link between low levels of literacy and economic disadvantage is not surprising. Other studies also emphasize that these two pressing social issues are interconnected.⁷ For example, research conducted by the National Anti-Poverty Organization (NAPO) in the early 1990s highlighted the plight of

adults with weak literacy skills living in poverty (NAPO 1992). Working-age women and men who are economically disadvantaged and who also possess weak literacy skills are doubly disadvantaged, and face a high risk of marginalization. The interacting and compounding effects of low income and limited literacy could result in high social and economic costs to individuals and to society, especially given the current economic restructuring and accompanying labour market changes.

Literacy and income

The relationship between literacy and economic well-being is also evident if household income is considered. As shown in Table 1.2, about one-quarter of working-age adults performing at Level 1 on the prose scale lived in households with incomes of less than \$15,000, compared with only about one-tenth of those at Levels 2 and 3 (the sample size for Level 4/5 was too small to produce reliable estimates). Conversely, a relatively small proportion of individuals with the poorest literacy skills lived in households with incomes of \$45,000 or more. Moreover, the likelihood of living in households with incomes of \$45,000 or more jumped dramatically between Levels 1 and 2, and then rose steadily with the level of literacy.⁸ Most working-age adults (61%) at Level 1 lived in households with incomes of less than \$30,000, whereas the vast majority (86%) of those at Level 4/5 lived in households with incomes of \$30,000 or more. An examination of average household income confirms the strength of the literacy–economic security relationship. As Table 1.3 indicates, the average household income of working-age adults at Level 1 on the prose scale was approximately \$28,100—less than half the average household income of adults at Level 4/5 (\$61,200).⁹ These patterns, for both household income categories and average household income, are similar for proficiencies on the document and quantitative scales (see Appendix Tables 2a, 2b and 3a, 3b).

Table 1.2 Incidence of low income and distribution across household income categories among working-age adults, by level of prose literacy, Canada, 1994

Prose scale	Percentage who were living in low-income households	Percentage of working-age adults who reside in households with incomes of:			
		Less than \$15,000	\$15,000 to \$29,999	\$30,000 to \$44,999	\$45,000 or more
Level 1	47	27	34	22	18
Level 2	22	10	24	18	49
Level 3	16	11	12	18	59
Level 4/5	8	...	11	18	68

... Sample size too small to provide reliable estimate.

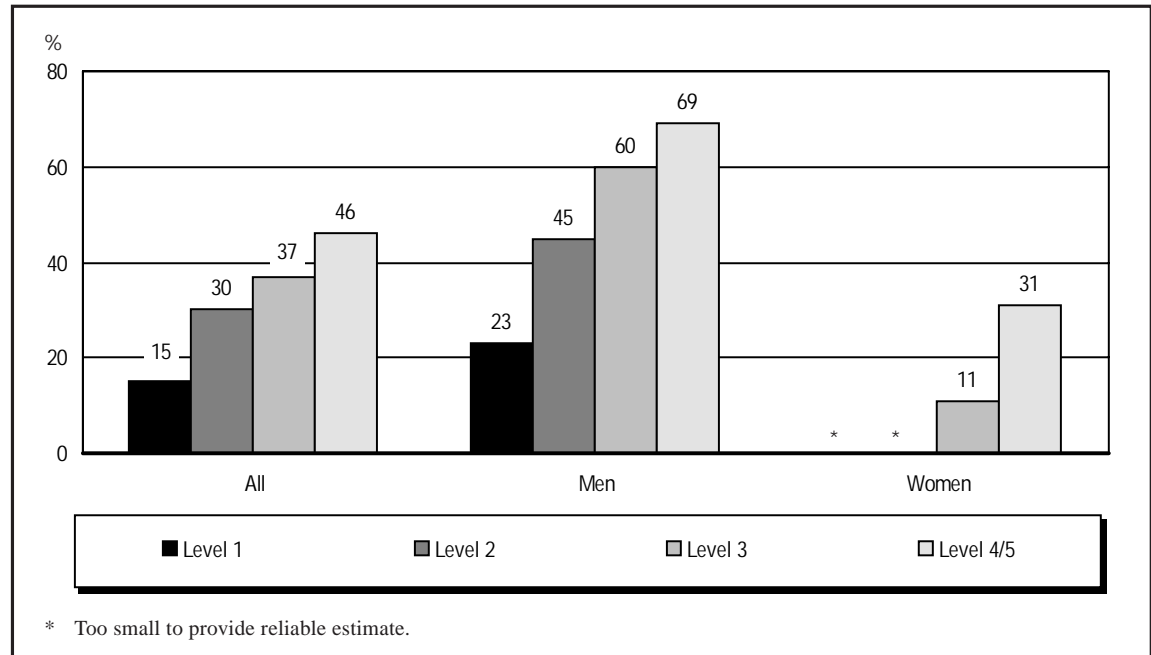
Table 1.3 Average household income, by level of prose literacy and household size, Canada, 1994

Prose scale	Average household incomes of working-age adults (\$)¹		
	One person in household	Two or more persons in household	All households
Level 1	14,200	30,300	28,100
Level 2	21,300	47,500	45,100
Level 3	26,400	56,900	54,700
Level 4/5	33,400	63,800	61,200

1. Dollar values have been rounded to the nearest 100.

An analysis of personal, rather than household, income further substantiates the strong relationship between literacy and economic security. As Table 1.4 shows, 33% of working-age adults with the weakest literacy skills on the prose scale had a total personal income of less than \$10,000, compared with 22% of those with the strongest skills. In addition, individuals at Level 4/5 were about three times as likely as those at Level 1 to have had a personal income of \$30,000 or more (see Figure 1.1). The likelihood of having a personal income of \$30,000 or more jumped between Levels 1 and 2, then rose steadily as the level of literacy increased.

Figure 1.1 Percentage of working-age adults with personal incomes of \$30,000 or more, by sex and level of prose literacy, Canada, 1994



The economic penalties associated with poor literacy skills can be further illustrated by regrouping personal income into two broad categories. Most working-age adults (67%) performing at Level 1 had a total personal income of less than \$20,000, whereas a similar proportion (65%) of those at Level 4/5 had a personal income of \$20,000 or more (see Table 1.4). The relationship between literacy skills and personal income is similar for the document and quantitative scales, although a greater proportion of individuals at Level 4/5 on the quantitative scale reported a personal income of \$20,000 or more (see Appendix Tables 4a and 4b). Clearly, working-age adults with stronger literacy skills are financially better off than those with weaker skills.

Table 1.4 Incidence of low income and distribution across personal income categories among working-age adults, by level of prose literacy, Canada, 1994

Prose scale	Percentage who were living in low-income households	Percentage of working-age adults with personal incomes of:			
		Less than \$10,000	\$10,000 to \$19,999	\$20,000 to \$29,999	\$30,000 or more
Level 1	47	33	34	18	15
Level 2	22	28	23	19	30
Level 3	16	29	17	18	37
Level 4/5	8	22	14	19	46

A comparison between working-age women and men points to striking gender differences in personal income (see Table 1.5). While less than one-quarter of men at each level of prose scale literacy had personal incomes of less than \$10,000 (the sample size for Level 4/5 was too small to produce reliable estimates), more than one-quarter of women at each level were found in this income category. At Level 3, men were more than five times as likely as women to have an income of \$30,000 or more; at Level 4/5 they were more than twice as likely as women to have this level of income (see Table 1.5). These patterns are similar for proficiencies on the document and quantitative scales (see Appendix Tables 5a and 5b).

Table 1.5 Incidence of low income and distribution across personal income categories among working-age adults, by level of prose literacy and sex, Canada, 1994

Prose scale	Percentage who were living in low-income households	Percentage of working-age adults with personal incomes of:			
		Less than \$10,000	\$10,000 to \$19,999	\$20,000 to \$29,999	\$30,000 or more
Men					
Level 1	40	22	35	21	23
Level 2	16	19	...	25	45
Level 3	11	18	12	11	60
Level 4/5	...	...	...	...	69
Women					
Level 1	59	51	32	...	...
Level 2	29	38	38	...	...
Level 3	22	41	23	25	11
Level 4/5	...	26	19	25	31

... Sample size too small to provide reliable estimate.

Examining average personal income further confirms that both women and men performing at lower levels of literacy suffered heavier income penalties.¹⁰ Nevertheless, men's average personal income was substantially higher than women's; men received approximately twice as much income as women at each literacy level on the prose scale (see Table 1.6). Most interesting is the fact that women with the strongest literacy skills had an average income (\$22,600) only slightly higher than that of men (\$19,800) with the weakest literacy skills. The pattern is similar when the document and quantitative scales are considered, although the gap between women and men narrowed at Level 4/5 on the quantitative scale (see Appendix Tables 6a and 6b).

Table 1.6 Average personal income among working-age adults, by level of prose literacy and sex, Canada, 1994

Prose scale	Average personal incomes of working-age adults (\$)¹		
	All	Men	Women
Level 1	16,400	19,800	10,900
Level 2	22,500	29,400	13,900
Level 3	25,400	34,000	15,900
Level 4/5	29,100	39,400	22,600

1. Dollar values have been rounded to the nearest 100.

So there is no doubt that adults with strong literacy skills enjoy greater economic security than their counterparts with weaker ones. There are income penalties associated with marginal literacy skills and, conversely, large income rewards for those with strong skills.

Other Canadian studies have documented the relationship between literacy and economic security. A national literacy survey commissioned by Southam News in 1987 showed that those with poor literacy skills had significantly lower incomes than those with stronger skills (Creative Research Group 1987, pp. 181–184). Likewise, the 1989 survey of Literacy Skills Used in Daily Activities (LSUDA), conducted by Statistics Canada, confirmed that individuals with higher levels of literacy were more likely to have higher incomes (Montigny and Jones 1990).

Despite the strong link between literacy and economic security, the IALS data indicate that many working-age adults with good literacy skills were not immune to economic insecurity. In addition, many adults with weak literacy skills were not economically marginalized. While various factors may explain these contradictions, disparities between women and men seem to be an important part of the explanation. Indeed, women with limited literacy skills suffer a greater income penalty than men with similar skills. Moreover, men do not need as strong literacy skills as women to command higher incomes. In fact, men with only marginal literacy skills are able to achieve better financial returns than women with stronger literacy skills. These findings are not surprising. Numerous studies have shown that men more than women tend to be found in certain occupations and industries where manual skills and physical strength, rather than literacy proficiencies, command high wages and offer other labour market advantages (Phillips and Phillips 1993; Armstrong and Armstrong 1994; Cohen 1994; Best 1995).

Literacy and access to paid employment

Because paid employment is the primary source of economic security for most Canadians, access to the labour market must be taken into account if we are to reach a deeper understanding of the relationship between literacy and economic security. Literacy skills, like other skills, play a role in determining the nature and extent of individuals' participation in the labour market and the rewards of paid work. Conversely, adults' labour market situation and economic security may affect their ability to develop the skills, including literacy proficiency, required to improve their position in the labour market and thus their economic well-being. For many working-age adults with marginal literacy skills, economic disadvantage may be due to exclusion from the labour market, unemployment or underemployment, or low-paid work. Differences between women and men in these areas warrant particular attention because, as we have shown, women are more likely to be economically disadvantaged and have lower incomes at each level of literacy.

Access to paid employment and the earnings from it are key to individuals' and families' economic well-being. The IALS allows us to explore certain indicators of individuals' labour market status. An examination of the main activities in which respondents were engaged at the time of the survey reveals that working-age adults with weaker literacy skills on all scales were less likely to be employed than those with stronger skills (see Appendix Tables 7a and 7b for the document and quantitative scales). Less than half (45%) of working-age adults at Level 1 on the prose scale were employed, compared with three-quarters of adults at Level 4/5 (see Table 1.7). Both women and men had a greater chance of being employed the higher they scored on the literacy scale. However, a larger proportion of men than women were employed at each literacy level. Most striking is the fact that men at Level 2 were engaged in paid work at a higher rate than women at Level 4/5.

Table 1.7 Main activity of working-age adults at time of survey, by level of prose literacy and sex, Canada, 1994

Prose scale	Employed (%)	Unemployed (%)	Homemaker (%)	Student (%)	Other (%)
All					
Level 1	45	16	18	...	15
Level 2	62	7	13	8	10
Level 3	68	8	10	10	4
Level 4/5	74	...	10	10	...
Men					
Level 1	52	22	...	...	...
Level 2	73	...	...	...	...
Level 3	78	...	...	10	...
Level 4/5	82	...	...	...	...
Women					
Level 1	36	...	41	...	...
Level 2	50	...	26	...	...
Level 3	58	9	19	10	...
Level 4/5	70	...	15	10	...

... Sample size too small to provide reliable estimate.

Among men with the poorest literacy skills, those who were not employed were most likely to still be in the labour force, but unemployed (22%). Among women with the poorest literacy skills, those who were not employed were most likely to be homemakers and therefore out of the labour force altogether. In fact, working-age women at all literacy levels who were not employed were mainly occupied as homemakers. There were, however, notable differences among women on the basis of their literacy skills. For example, 41% of working-age women at Level 1 were homemakers, compared with only 15% at Level 4/5. Women at Level 1 were the only group with a majority (57%) not participating in the labour force (data not shown).

The data demonstrate that, while a large majority of working-age men participated in the paid labour force, those with stronger literacy skills had more success securing paid employment than those with weaker skills. For their part, women tended to participate less than men in the paid labour force and a sizeable minority, especially those with the poorest literacy skills, worked as homemakers. Clearly, women's traditional responsibilities for child care and domestic labour reduces their likelihood of taking on a paid job, regardless of their literacy abilities. Women with marginal literacy skills may also have more difficulty gaining access to the labour market, and may encounter problems finding jobs that provide sufficient income to cover the costs of child care and other paid work-related expenses.

Literacy and employment status

Analyzing the labour market status of individuals at a particular point in time provides useful insights into the link between literacy and economic security. The strong relationship between literacy and paid work is again evident when we examine respondents' employment status during the year before the survey. Working-age adults with the strongest literacy skills on the prose scale were far more likely to have been employed during the year than those with the weakest skills (see Table 1.8). Level 1 respondents were almost four times as likely as those at Level 4/5 to have had no weeks of paid employment during the year. A similar pattern emerged for both women and men, although a higher proportion of women had no weeks of employment. Not only were individuals with poor literacy skills less likely to be employed, but those who were employed had fewer weeks of paid work than those with stronger skills. In the year preceding the survey, only about one-third of working-age adults at Level 1 had a full year of employment compared with two-thirds of those at Level 4/5. Generally, men were more likely than women to have worked a

full year (see Figure 1.2). The relationship between literacy skills and employment status is similar for the document and quantitative scales (see Appendix Tables 8a and 8b).

Table 1.8 Number of weeks working-age adults were employed during previous year, by level of prose literacy and sex, Canada, 1994

Prose scale	Percentage of working-age adults who were:		
	Not employed during the year	Employed part year (1 to 48 weeks)	Employed full year (49 weeks or more)
All			
Level 1	41	23	36
Level 2	28	20	52
Level 3	18	27	56
Level 4/5	11	23	66
Men			
Level 1	30	33	37
Level 2	19	19	62
Level 3	...	27	65
Level 4/5	...	23	73
Women			
Level 1	54	...	35
Level 2	38	22	41
Level 3	29	26	45
Level 4/5	15	23	62

... Sample size too small to provide reliable estimate.

Focussing specifically on the employment status of working-age adults living in low-income households reveals an even stronger link between literacy and access to paid work. This pattern holds true for all literacy scales (see Appendix Tables 9a and 9b for the document and quantitative scales). As noted earlier, 47% of working-age adults at Level 1 on the prose scale resided in low-income households (see Table 1.9). Of these, two-thirds were not employed at all during the year preceding the survey (some were unemployed while others remained out of the labour force for other reasons). The remaining one-third were employed for either part or all of the year. As the level of literacy increased, working-age adults living in low-income households were more likely to have been employed for at least part of the year (although the sample size for Level 4/5 was too small to produce reliable estimates).

Figure 1.2 Working-age adults employed full year, by sex and level of prose literacy, Canada, 1994

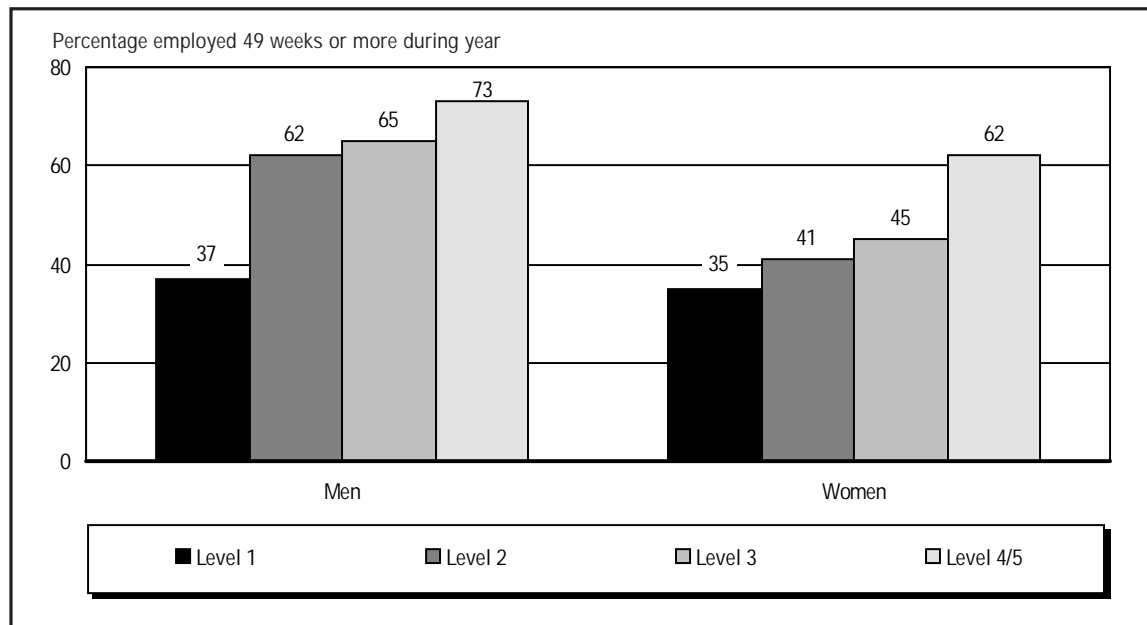


Table 1.9 Incidence of low income and labour force activities among working-age adults during the year, by level of prose literacy, Canada, 1994

Prose scale	Percentage who were living in low-income households	Percentage of working-age adults living in low-income households who were:	
		Not employed during the year	Employed for part or all of the year
Level 1	47	66	34
Level 2	22	61	39
Level 3	16	54	46
Level 4/5	8	...	...

... Sample size too small to provide reliable estimate.

The link between literacy and employment status is a strong one. Working-age adults performing at lower levels of literacy are far less likely than those at higher levels to be engaged in paid employment, and far more likely to be unemployed or outside of the labour market altogether. They are also less likely to be employed year-round. However, the fact that a significant proportion of individuals with low levels of literacy had employment during the year, yet were still economically disadvantaged, raises questions about the quality of jobs available to them.

Literacy and employment income

Working-age adults with weaker literacy skills had much lower average earnings than did those with stronger skills (see Table 1.10). The average earnings of workers at Level 1 on the prose scale (\$18,300) were \$11,500 less than the average earnings of those at Level 4/5 (\$29,800). Among working-age adults employed full time, full year, there were also large gaps between those of different literacy levels. The gap between Level 1 and Level 4/5 was \$15,500, even greater than that between the top and bottom of the prose literacy scale among all workers. The earnings differential among full-time, full-year workers is because of differences in pay, not differences in the number of hours worked each week or the number of weeks worked during the year.

Workers with weaker literacy skills are more likely to be employed in lower-paying jobs than are those with stronger skills. Many with weaker literacy skills may not be able to earn enough to reach a higher standard of living.¹¹ For example, in 1993, a couple with two children living in a moderate-sized city required about \$26,600 to reach Statistics Canada's low income cut-off. The average earnings of a full-time, full-year worker at Level 1 on the prose scale was almost \$2,500 below this amount, according to IALS data. If this individual was the sole earner in a two-parent, two-child family, he or she would not be earning enough to keep the family from being economically disadvantaged. The family would face an even greater shortfall if the earner were employed part time or unemployed for part of the year.

Table 1.10 Average earnings of working-age adults, by level of prose literacy and sex, Canada, 1994

Prose scale	Percentage with earnings	Of those with earnings, average amount received (\$)¹	
		All workers	Full-time, full-year workers
All			
Level 1	56	18,300	24,200
Level 2	71	24,900	32,100
Level 3	79	25,800	36,000
Level 4/5	88	29,800	39,700
Men			
Level 1	67	20,800	30,000
Level 2	82	31,900	37,900
Level 3	92	30,600	38,900
Level 4/5	96	39,400	47,400
Women			
Level 1	41	13,000	15,500
Level 2	60	14,400	20,000
Level 3	64	18,300	28,800
Level 4/5	83	23,300	32,300

1. Dollar values have been rounded to the nearest 100.

The gender differences observed thus far are further substantiated when employment income is examined. At each literacy level, a higher proportion of working-age men than women had earnings (see Table 1.10). For example, among individuals performing at Level 1 on the prose scale, 67% of men had earnings compared with only 41% of women. This difference diminished as the level of literacy increased. Moreover, men's average earnings were higher than women's at each literacy level. This observation holds true whether all workers are considered, or whether the analysis is limited to full-time, full-year workers. Most striking is that, among all workers, the earnings of men at Level 1 were almost as high as the earnings of women at Level 4/5. Similarly, for those who were employed full time, full year, men at the lowest literacy level earned only slightly less (\$30,000) than women at the highest literacy level (\$32,300). These earnings patterns are similar for the document and quantitative scales (see Appendix Tables 10a and 10b). The gender-segregated nature of the labour market helps explain the earnings disparities among full-time, full-year workers. Despite women's increased participation in the paid labour force over the past three decades, and their movement into better jobs, men continue to dominate jobs in better-paying industry sectors such as manufacturing, forestry, mining and construction, whereas women are more concentrated in jobs in the lower-paying service sector (Armstrong and Armstrong 1994; Statistics Canada 1995). Higher rates of unionization, which usually translate into more advantageous wages and benefits, are also a more prominent feature of men's employment experience than of women's (White 1993; Galarneau 1996).

For both women and men with poor literacy skills, escaping economic insecurity through participation in the labour force may prove difficult. Reliance on the labour market as a guarantee against economic disadvantage may be even more problematic for women with poor literacy skills. Women at Level 1 on the prose scale who were employed for at least part of the year earned, on average, \$13,000. As a point of comparison, in 1993, a single parent with one child living in a moderate-size city required about \$17,700 to reach Statistics Canada's low income cut-off. Hence, despite her paid employment, a single mother at the lowest level of literacy would still have earnings that left her and her family almost \$5,000 below the LICO.

Literacy and sources of income

Labour market participation and paid employment earnings are crucial to many individuals' and families' economic well-being. For most IALS respondents, earnings were the single largest source of income. Nonetheless, the effects of lower labour force participation rates, higher rates of unemployment, fewer weeks of work and lower earnings are reflected in the sources of income on which those with poor literacy skills rely. Indeed, working-age adults with the weakest literacy skills on the prose scale received, on average, only 52% of their total income from employment. The remainder came from other sources (see Table 1.11). In contrast, those at Level 4/5 received 83% of their total income from employment and only 17% from other sources. While this pattern is evident among both women and men, women at each level of literacy secured a smaller share of their total income from employment than did men. An examination of the document and quantitative scales shows similar results. The most notable difference is found on the quantitative scale, where women at Level 1 received a much smaller share of their income from employment (see Appendix Tables 11a and 11b).

Table 1.11 Sources of personal income of working-age adults, by level of prose literacy and sex, Canada, 1994

Prose scale	Percentage of personal income from employment earnings	Percentage of personal income from other sources
All		
Level 1	52	48
Level 2	67	33
Level 3	70	30
Level 4/5	83	17
Men		
Level 1	56	44
Level 2	77	23
Level 3	80	20
Level 4/5	89	11
Women		
Level 1	45	55
Level 2	54	46
Level 3	59	41
Level 4/5	78	22

When Canadians lose their job, are unable to find sufficient employment or cannot engage in paid work for various reasons, they may receive income support from government programs. The IALS provides an opportunity to examine the connection between literacy and reliance on two such programs, Unemployment Insurance¹² and Social Assistance. At each level of literacy on all scales, most working-age adults did not receive benefits from either Unemployment Insurance or Social Assistance (see Table 1.12; see also Appendix Tables 12a and 12b for the document and

quantitative scales). Nonetheless, individuals with weaker literacy skills were more apt than those with stronger skills to have relied on these two sources of income. A gender analysis again shows important differences between women and men. In general, men were less likely than women to have relied on these sources of income. These differences may be explained by women's greater exclusion from paid employment, their predominance as unpaid homemakers, their greater likelihood of heading single-parent families, and the nature of the paid jobs they hold.

Table 1.12 Sources of personal income of working-age adults, by level of prose literacy and sex, Canada, 1994

Prose scale	Percentage of individuals with income from Unemployment Insurance (UI) ¹	Percentage of individuals with income from Social Assistance (SA) ¹	Percentage of individuals who <i>did not</i> receive income from either UI or SA
All			
Level 1	21	22	59
Level 2	21	11	69
Level 3	19	8	75
Level 4/5	11	...	86
Men			
Level 1	29	19	55
Level 2	16	...	77
Level 3	18	...	78
Level 4/5	...	...	91
Women			
Level 1	...	26	65
Level 2	27	14	61
Level 3	19	11	71
Level 4/5	12	...	83

1. Information on receipt of income UI and SA is available for only a subgroup of IALS respondents, and should be interpreted with caution. Information is not available for 1,044 respondents, all of whom were Franco-Ontarians.

... Sample size too small to provide reliable estimate.

The relationship between marginal literacy skills and receipt of Unemployment Insurance and Social Assistance is not surprising. This link has been found in many previous studies. NAPO, for example, has reported that persons with low literacy skills often rely on government assistance programs as their main source of income (NAPO 1992). And, in discussing the adult literacy problem in Ontario, Burt Perrin Associates concluded, on the basis of 1986 caseload data, that probably more than half of the province's social assistance recipients had major literacy difficulties (Burt Perrin Associates 1987). Studies have cautioned, however, against attempts to estimate the social assistance program costs of low literacy without a clear understanding of the linkages between literacy and other social problems (Townson 1987).

Understanding the literacy, economic security and labour market connections

There is, without a doubt, a connection between literacy and economic security. Working-age adults with stronger literacy abilities are less likely than those with weaker abilities to live in lower-income households, and are more likely to have higher personal income. Those with well-developed literacy skills also fare much better in the labour market. Indeed, they tend to have greater access to paid work and to be employed full time, full year. In addition, individuals with stronger literacy skills find themselves in a better position in the labour market than do their counterparts with marginal proficiencies. They find more highly-skilled jobs that command higher

wages and salaries. Finally, working-age adults possessing strong literacy skills receive a higher proportion of their income from earnings, and are less likely to rely on government support programs such as Unemployment Insurance and Social Assistance.

The relationship between literacy skills and economic security is less straightforward when gender is taken into account. Comparing working-age women and men reveals some similarities, but also troubling disparities between the sexes. Both working-age women and men with marginal literacy skills have more difficulty ensuring their economic well-being. However, women with marginal literacy proficiencies are worse off than men with similar proficiencies. And, while women with higher levels of literacy derive greater rewards from the labour market than their counterparts with lower levels, they earn roughly the same as men with weak literacy skills. These overall disparities and women's more precarious economic situation may be due to their particular position in and out of the labour market.¹³ Indeed, studies have shown that the segmentation of the labour market by gender, the nature of women's paid work, the devaluing of certain skills and women's predominant responsibility for household labour and child care have undermined their ability to achieve and sustain economic security (Gunderson, Muszynski and Keck 1990; Phillips and Phillips 1993; Armstrong and Armstrong 1994).

The findings thus far clearly demonstrate that individuals' ability to enter the labour market and find a well-paying job is influenced by their literacy skills. At first glance, the evidence seems to support human capital theory's contention that unequal labour market returns are the result of different investments individuals make in their own human capital. However, this theoretical framework cannot account for the gender disparities that have been highlighted throughout this discussion of the relationship between literacy, economic security and the labour market. The IALS data systematically show that women with stronger literacy skills are not as highly rewarded in the labour market as men with similar or even weaker literacy skills. The labour market segmentation perspective offers a better explanation of these unequal labour market outcomes. Women and men do not receive the same rewards for their literacy skills partly because they operate in different markets, and these markets seem to place different values on literacy abilities. In this gender-segregated labour market, women derive fewer benefits from investment in their literacy skills. Several trends suggest that women's situation could improve in the near future. The transformation of the Canadian economy into one that is more information-based and knowledge-intensive and less focused on manual skills and physical strength may benefit women. Higher rates of unionization for women may also result in better paybacks for investment in their skills. Women's increasing enrolment in certain academic programs, their pursuit of higher levels of education, and greater access to training could enable them to take better advantage of the opportunities in the new economy.

Chapter 2

Economic security, lifelong learning and the practices of literacy

Sound literacy skills are doubtless a key ingredient for labour market success, especially in the context of global economic restructuring and the entrenchment of an information-based economy. Because literacy provides the foundation for the acquisition of many skills, individuals without adequate literacy skills may find themselves in a precarious position in the wake of these structural changes. Strong literacy skills therefore are critical for securing a solid foothold in the labour market and in achieving economic well-being.

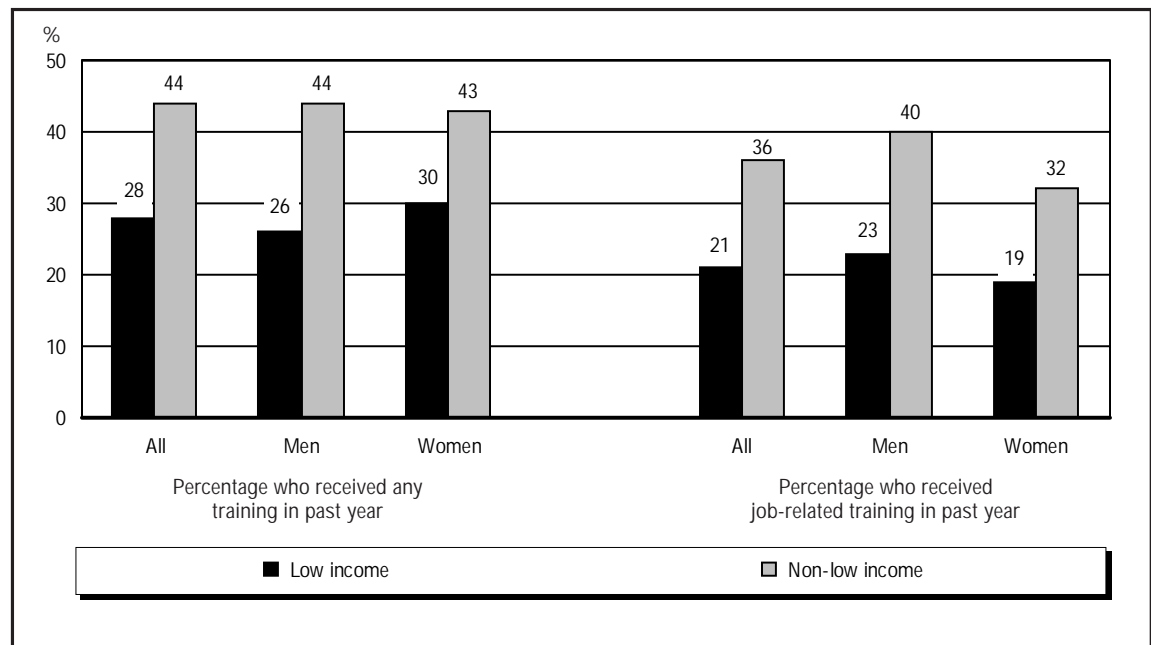
Literacy skills are not static but need to be maintained and enhanced with regular use. While the formal education system nurtures the initial development of literacy skills, people's experiences into adulthood further fashion these skills. As studies have shown, literacy skills, like other skills, are sustained and strengthened through continuing education and training as well as through use on and off the job (Kirsch, Jungeblut, Jenkins and Kolstad 1993; Statistics Canada and Human Resources Development Canada 1996; Human Resources Development Canada and OECD 1997, pp. 91–106). Individuals' opportunities to cultivate literacy skills through use are shaped by many factors, including their labour market participation, the types of jobs they hold, and their access to training and education (Berryman 1994; Forrester, Payne and Ward 1995; Crompton 1996; Krahn and Lowe, forthcoming). However, access to such opportunities varies widely and, as a result, some are more able to build on their literacy skills than are others. An individual's economic situation can also facilitate or hinder the ability to exercise literacy skills. Adults living in difficult economic circumstances may not have easy access to avenues of skills development and lifelong learning, or they may not, for a variety of reasons, pursue such learning opportunities whether they are engaged in the labour market or not. Individuals' ability to maintain and perfect their literacy skills through training and use on the job or elsewhere can, in turn, influence their economic well-being.

Literacy, economic security and adult training and education

IALS respondents were asked if they had received any training or education, such as courses, private lessons, correspondence courses, on-the-job training and apprenticeship training, in the previous 12 months. As Figure 2.1 shows, working-age adults from low-income households were less likely than those from non-low-income households to have received such training (28% and 44% respectively). This pattern was evident among both women and men.

When job-related training or education is considered on its own, working-age adults from non-low-income homes clearly have greater opportunities for lifelong learning than those from low-income homes. More than one-third of adults from non-low-income households had received job-related training or education in the previous year, compared with about one-fifth of adults from low-income households. Women were less likely than men to have received such training or education, regardless of whether the household they lived in was low income or not.

Figure 2.1 Working-age adults receiving training or education during the year, by sex and income status, Canada, 1994



Several factors may account for these differences between individuals from low-income and non-low-income households. Opportunities for on-the-job training are not an option for many adults from low-income households because they are not engaged in paid employment. Of those who do participate in the labour force, many may be unemployed or have low-paying, low-skilled jobs with few training or education opportunities. Moreover, individuals from low-income households are less likely to have worked throughout the year, and may have a more precarious attachment to the labour market. As other studies have shown, employers tend to provide training to workers with longer job tenure and a career path within the organization (Betcherman and Leckie 1995).

As discussed earlier, adults living in low-income households tended to possess more marginal literacy skills than did those from non-low-income households. On all three literacy scales, the IALS data show that working-age adults with weaker skills were less likely to have received job-related training and education than were those with stronger skills (see Appendix Tables 13a and 13b for results based on the document and quantitative scales). On the prose scale, for example, adults at Level 4/5 participated more than three times as often in such training as did those at Level 1 (see Table 2.1). This pattern holds when women and men are considered separately, although at each level of literacy men were more likely to have received job-related training and education. Clearly, individuals living in difficult economic circumstances and/or possessing weak literacy skills face great difficulties gaining access to job-related training and education.

Table 2.1 Job-related training and education received by working-age adults, by prose literacy and sex, Canada, 1994

Prose scale	Percentage of working-age adults who received any <i>job-related</i> training or education in previous 12 months		
	All	Men	Women
Level 1	15	17	...
Level 2	29	35	22
Level 3	41	45	37
Level 4/5	49	61	42

... Sample size too small to provide reliable estimate.

Although individuals from low-income households were less likely to have received training, they were almost as likely as those from non-low-income households to desire career or job-related training. There were no major differences between women and men (see Table 2.2). For adults in low-income households, cost was the biggest impediment to job-related training or education, whereas lack of time was the main barrier for those in non-low-income households (table not shown).

Table 2.2 Training and education wanted but not received by working-age adults, by income status and sex, Canada, 1994

	Percentage of working-age adults who wanted <i>job-related</i> training or education in previous 12 months but did not receive it		
	All	Men	Women
Low income	27	26	28
Non-low income	31	32	29

Career and job-related education and training programs are less likely to reach individuals with weaker skills and those in more difficult economic circumstances. Other studies of the distribution of training opportunities have consistently demonstrated that those who are already disadvantaged in educational, occupational or economic terms are also least likely to obtain additional vocational or job-related training. For example, in 1991, the Economic Council of Canada reported that most firms provided limited training, and that the training offered was heavily concentrated among highly-skilled, well-educated male workers (Economic Council of Canada 1990, p. 24). The 1994 Adult Education and Training Survey found that university graduates and those earning over \$60,000 a year were more likely to participate in job-related training than were individuals with high school or less or those making less than \$15,000 (Human Resources Development Canada and Statistics Canada 1997, pp. 26–27).

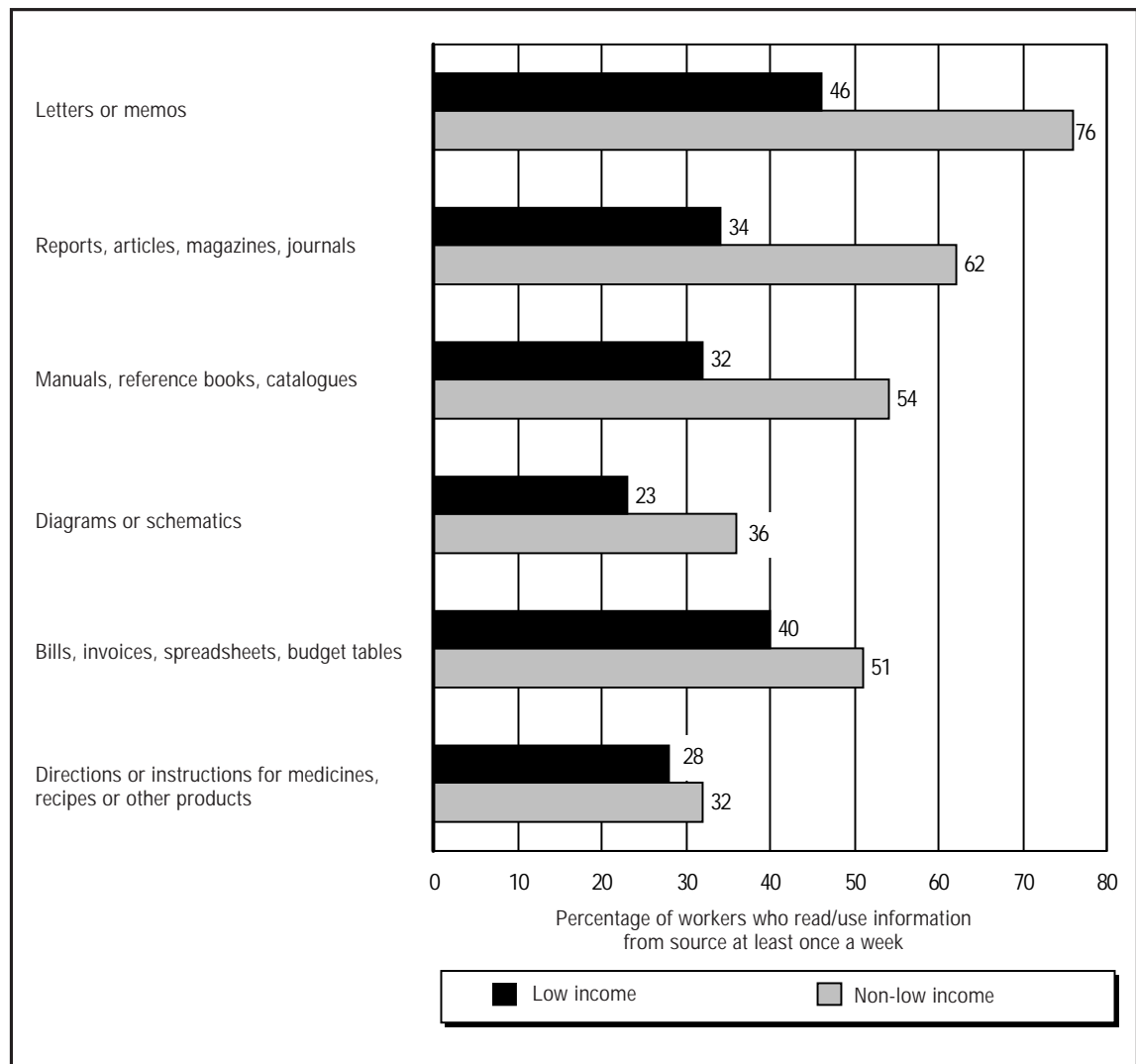
Economic security and literacy practices on the job

The opportunity to exercise literacy skills on the job is crucial to their maintenance and enhancement. If workers are not able to make use of their literacy on the job, these skills may deteriorate over time; this could have dire consequences for those facing rapidly-changing workplaces. Individuals in difficult economic circumstances who hold jobs that do not require advanced skills, and who have few opportunities to exercise their literacy skills, face an even greater challenge in the new economy. Because they do not have the opportunity to maintain or improve their skills in the workplace, working-age adults who receive Unemployment Insurance or Social Assistance are at greater risk of seeing their skills erode. In this context, the high rates of youth unemployment are

cause for concern. The large number of young people missing out on key opportunities to exercise their literacy skills at a paid job could lead to widespread degradation of this generation's skills. This would cost both individuals and society dearly.¹⁴

The IALS offers insights into the relationship between economic security and literacy practices on the job. Employed adults from low-income households engaged less than those from non-low-income households in workplace reading tasks on a weekly basis (see Figure 2.2 and Appendix Table 14). Close to half of employed adults from low-income homes read or used letters or memos at least once a week on the job, whereas roughly three-quarters of those from non-low-income homes did so. A similar pattern emerges when other literacy practices are considered. For example, 62% of employed adults from non-low-income homes made weekly use of reports, articles, magazines or journals on the job, while only one-third of adults from low-income homes did so. It is worth noting that many employed individuals were engaging in various reading practices less than once a week (see Appendix Table 14). While this was particularly true of employed individuals living in low-income homes, a significant number from non-low-income homes also undertook these practices only infrequently.

Figure 2.2 Literacy practices on the job, by income status, Canada, 1994



The use of reading skills on the job varied to some degree between women and men (see Appendix Table 14). There were only small differences between women and men for many practices (for example, the reading or use of reports, articles or magazines, and of manuals, reference books or catalogues) regardless of whether they lived in low-income or non-low-income homes. However, in both types of households, women were less likely than men to read or use diagrams or schematics on the job, a difference that likely reflects occupational differences between the sexes.

As with reading skills, individuals from non-low-income households tended to use writing skills on the job more frequently than did those from low-income households (see Table 2.3). While 59% of employed adults from non-low-income homes wrote or filled out letters or memos at least once a week, only 33% of those from low-income homes did so. Likewise, adults from non-low-income households were almost twice as likely as those from low-income households to write or fill out reports or articles on a weekly basis. The pattern is similar for other on-the-job writing practices, although the differences are not as pronounced. The majority of individuals from both low-income and non-low-income homes exercised most on-the-job writing skills less than once a week. The fact that a large proportion of employed adults were not practicing their writing skills weekly raises concerns about the extent to which such skills are not being improved, and may even deteriorate over time. The on-the-job use of writing skills, like that of reading skills, varied only slightly between women and men, regardless of household type (see Appendix Table 15).

Table 2.3 Literacy practices on the job by employed individuals, by income status, Canada, 1994

How often do you write or fill out each of the following as part of your main job:	At least once a week (%)	Infrequently, rarely or never (%)
Letters or memos?		
Low income	33	67
Non-low income	59	41
Forms, bills, invoices or budgets?		
Low income	38	62
Non-low income	49	51
Reports or articles?		
Low income	25	75
Non-low income	45	55
Estimates or technical specifications?		
Low income	23	77
Non-low income	30	70

Respondents practiced numeracy in much the same pattern as literacy. Employed adults from low-income households were less likely than those from non-low-income households to use arithmetic or mathematics to calculate prices, costs or budgets. However, there was no difference in the use of arithmetic or mathematics to measure or estimate the size or weight of objects (see Table 2.4). Women from both low-income and non-low-income homes were much less likely than men to use arithmetic or mathematics to measure or estimate the size or weight of objects (see Appendix Table 16). The gender difference in the use of arithmetic or mathematics to calculate prices, costs or budgets was less pronounced. It is worth reiterating that when comparisons are drawn between women and men, some differences appear in the on-the-job utilization of literacy and numeracy skills. Differences, however, tend to be most evident in the use of arithmetic, mathematics, diagrams or schematics. These variations may reflect the types of occupations in which women and men are employed. For example, women occupy a smaller proportion of jobs in certain trades and professions where estimates and technical specifications are most commonly used.

Table 2.4 Numeracy practices on the job by employed individuals, by income status, Canada, 1994

In your main job how often do you use arithmetic or mathematics:	At least once a week (%)	Infrequently, rarely or never (%)
To measure or estimate the size or weight of objects?		
Low income	47	53
Non-low income	47	53
To calculate prices, costs or budgets?		
Low income	38	62
Non-low income	49	51

Overall, adults from low-income households are far less likely than those from non-low-income households to engage in literacy practices on the job. This low rate of involvement is evident across a wide range of indicators. The lower likelihood of individuals from low-income households using literacy skills on the job may be a reflection of their own skills. Indeed, a larger proportion of adults living in low-income homes had marginal literacy skills (not illustrated). However, this pattern may also be attributable to the types of jobs in which adults from low-income households tend to be employed. Given their relatively low earnings, these adults appear to be concentrated in jobs that require fewer skills and offer fewer opportunities to enhance them. If the paid workplace is not designed to allow workers to make use of, and develop, their skills, individuals may see their literacy abilities deteriorate.

To a certain extent, individuals from low-income households are aware of the impact of poor literacy skills on their paid employment. Compared with their counterparts from non-low-income households, adults from low-income households are more likely to consider their literacy skills insufficient to meet the demands of a paid job. For example, when asked to rate their writing skills for their main job, 68% of adults from low-income homes rated their skills as good or excellent, compared with 88% of adults from non-low-income homes (see Table 2.5). The same pattern was evident for reading and mathematical skills, although the differences were not as pronounced. While a greater proportion of men than women from low-income and non-low-income households rated their mathematical skills as good or excellent, the opposite was true for writing skills.

Despite differences in self-assessment between individuals from low-income and non-low-income households, a sizeable majority of employed respondents, be they women or men, believed that their literacy skills needed for their main job were good or excellent. This self-assessment of literacy skills may accurately reflect the skill requirements of their jobs. It may suggest, however, that some individuals have higher skills than are actually needed for their job or that some are not aware that their skills are limited. Adults with marginal literacy skills may have more difficulty coping with changes in the labour market and with new skill requirements if they do not consider themselves at risk. This challenge will be even greater for those who are already economically disadvantaged.

Table 2.5 Self-assessment of literacy and numeracy skills on the job, by income status and sex, Canada, 1994

	How would you rate your reading skills for your main job?	
	Excellent or good (%)	Moderate or poor (%)
All		
Low income	82	...
Non-low income	91	9
Men		
Low income	87	...
Non-low income	91	9
Women		
Low income	77	...
Non-low income	92	8
	How would you rate your writing skills for your main job?	
	Excellent or good (%)	Moderate or poor (%)
All		
Low income	68	32
Non-low income	88	12
Men		
Low income	60	40
Non-low income	84	16
Women		
Low income	79	...
Non-low income	92	8
	How would you rate your mathematical skills for your main job?	
	Excellent or good (%)	Moderate or poor (%)
All		
Low income	80	...
Non-low income	91	9
Men		
Low income	83	...
Non-low income	94	6
Women		
Low income	76	...
Non-low income	87	13

... Sample size too small to provide reliable estimate.

A significant minority of employed adults understand that their weak literacy skills are limiting their job opportunities. A larger proportion of those from low-income households reported that their reading, writing and mathematical skills limited their job opportunities (see Figure 2.3). For example, one-third of employed adults from low-income households indicated that their reading skills greatly or somewhat limited job opportunities such as advancement or getting another job. In contrast, 9% of individuals from non-low-income households expressed this concern. Women and men differently perceived the limitations on job opportunities imposed by weak literacy skills (see Table 2.6). Most strikingly, 88% of men from low-income homes reported that their mathematical skills did not limit their job opportunities, compared with 66% of women from such homes.

Figure 2.3 Limitations on job opportunities experienced by employed adults, by income status, Canada, 1994

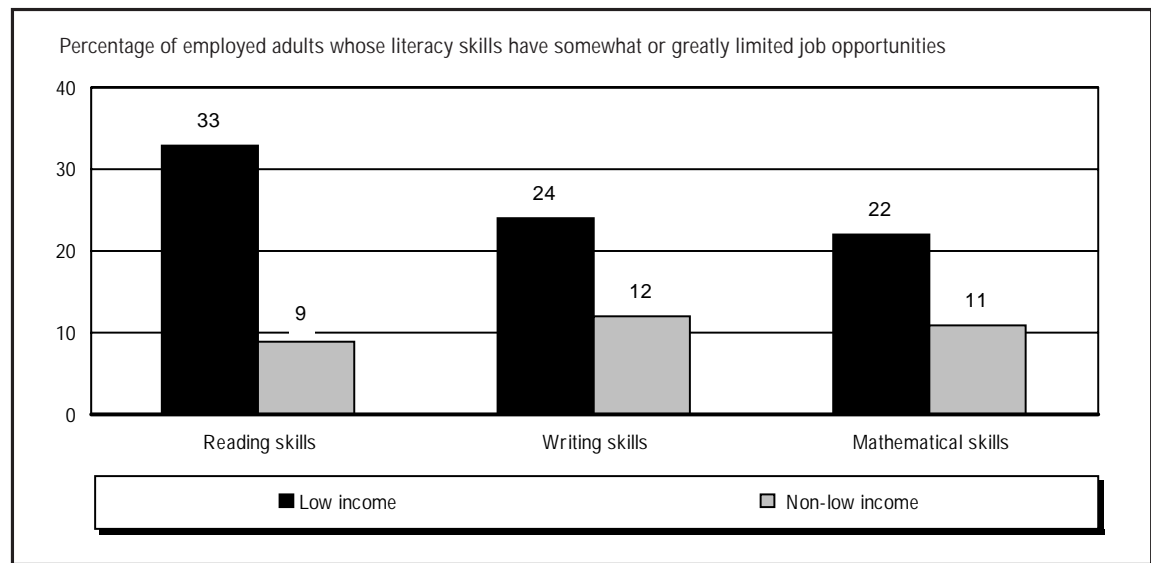


Table 2.6 Limitations on job opportunities experienced by employed adults, by income status and sex, Canada, 1994

	Reading skills limiting job opportunities	
	Somewhat or greatly limiting (%)	Not at all limiting (%)
All		
Low income	33	67
Non-low income	9	91
Men		
Low income	...	66
Non-low income	11	89
Women		
Low income	...	68
Non-low income	5	95
	Writing skills limiting job opportunities	
	Somewhat or greatly limiting (%)	Not at all limiting (%)
All		
Low income	24	76
Non-low income	12	88
Men		
Low income	...	79
Non-low income	14	86
Women		
Low income	...	73
Non-low income	9	91
	Mathematical skills limiting job opportunities	
	Somewhat or greatly limiting (%)	Not at all limiting (%)
All		
Low income	22	78
Non-low income	11	89
Men		
Low income	...	88
Non-low income	10	90
Women		
Low income	...	66
Non-low income	14	86

... Sample size too small to provide reliable estimate.

An interesting yet potentially disturbing finding is the high proportion of both women and men who believed that their literacy skills did not limit their advancement or ability to get another job. At least 86% of those from non-low-income households were not at all concerned about the limitations of their reading, writing or mathematical skills. Moreover, at least two-thirds of those living in low-income households held a similar view. This assessment may be an accurate reflection of individuals' skill levels (whether they are sufficiently skilled or overly skilled for their jobs). Or it may show that many working-age adults are unknowingly at risk, given the need to be adaptable in order to navigate the turbulent waters of the changing labour market.

Clearly, economically disadvantaged adults are not generally found in jobs that would help them develop literacy skills. A more advantageous position in the labour market translates into better opportunities to exercise, and thus enhance, literacy skills. If employed adults are not practicing literacy regularly, they may not be able to enhance their skills or, worse still, they may be at risk of seeing their literacy proficiency deteriorate. Working-age adults with poor literacy skills, and those whose skills weaken from lack of use, may find it difficult to improve their labour market situation and their economic well-being, especially in today's information-based economy.

Economic security and literacy practices outside of paid work

Literacy practices do not take place exclusively in the paid workplace. People use their literacy skills in everyday activities, thereby maintaining and enhancing those skills (OECD and Statistics Canada 1995; Statistics Canada and Human Resources Development Canada 1996). Literacy practices in everyday activities undoubtedly reinforce skills honed at paid work. However, economically disadvantaged adults may not have the same opportunities to exercise their literacy skills and, conversely, those who seldom use their literacy skills may face higher hurdles in improving their economic security.

Working-age adults from low-income households engaged in reading activities outside of paid work less often than did those from non-low-income households (see Tables 2.7 and 2.8). For example, 56% of adults from non-low-income homes read or used letters or memos weekly, compared with 34% of those from low-income homes. A similar pattern emerges when other literacy practices are considered, although the differences are less pronounced. Individuals from both types of households were almost equally likely to read books at least once a week.

Table 2.7 Literacy practices outside of paid work among working-age adults, by income status, Canada, 1994

How often do you read or use information from:	At least once a week (%)	Infrequently, rarely or never (%)
Letters or memos?		
Low income	34	66
Non-low income	56	44
Reports, articles, magazines or journals?		
Low income	51	49
Non-low income	73	27
Manuals, reference books or catalogues?		
Low income	42	58
Non-low income	52	48

Table 2.8 Literacy practices outside of paid work among working-age adults, by income status, Canada, 1994

How often do you read:	Daily or weekly (%)	Monthly (%)	Rarely or never (%)
Newspapers or magazines?			
Low income	77	...	16
Non-low income	92	5	4
Books?			
Low income	46	12	42
Non-low income	51	15	34

... Sample size too small to provide reliable estimate.

While the data show encouraging signs, some of the findings are cause for concern. For example, only about half of working-age adults from both types of homes read books at least once a week. As well, more than one-third of respondents from both groups reported rarely or never reading books. Moreover, large proportions of adults from both low-income and non-low-income homes were engaging infrequently in other reading practices outside of paid work, including reading or using letters or memos, reports, articles or journals and manuals, reference books or catalogues. A gender analysis of everyday literacy practices shows that women from both low-income and non-low-income homes tended to partake more than men in various reading practices (see Tables 2.9 and 2.10). However, many women and men did not read often outside of paid work.

Table 2.9 Literacy practices outside of paid work among working-age adults, by income status and sex, Canada, 1994

How often do you read or use information from:	At least once a week (%)	Infrequently, rarely or never (%)
Letters or memos?		
Men		
Low income	30	70
Non-low income	52	48
Women		
Low income	36	64
Non-low income	61	39
Reports, articles, magazines or journals?		
Men		
Low income	36	64
Non-low income	72	28
Women		
Low income	63	37
Non-low income	75	25
Manuals, reference books or catalogues?		
Men		
Low income	36	64
Non-low income	52	48
Women		
Low income	47	53
Non-low income	52	48

Table 2.10 Literacy practices outside of paid work among working-age adults, by income status and sex, Canada, 1994

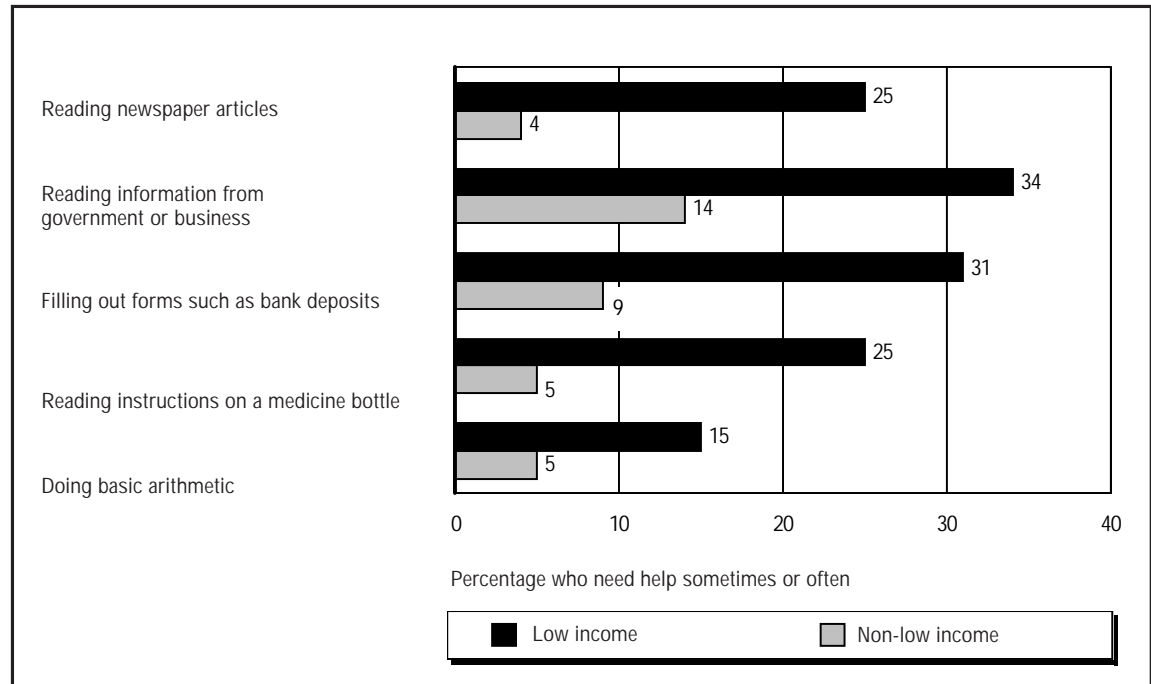
	Daily or weekly (%)	Monthly (%)	Rarely or never (%)
How often do you read newspapers or magazines?			
Men			
Low income	68	...	28
Non-low income	92	...	...
Women			
Low income	85	...	...
Non-low income	92	...	...
How often do you read books?			
Men			
Low income	34	...	56
Non-low income	38	15	47
Women			
Low income	55	...	32
Non-low income	67	14	19

... Sample size too small to provide reliable estimate.

As noted earlier, economically disadvantaged individuals tend to have weaker literacy skills, a situation that may make it more difficult for them to engage in literacy practices without some assistance. Indeed, the IALS data indicate that working-age adults from low-income households required assistance more often when performing certain literacy tasks than did those from non-low-income households (see Figure 2.4). Some of the differences are striking. Adults living in low-income households were more than six times as likely as those from non-low-income households to need help reading newspaper articles. They were also five times as likely to need help reading instructions on medicine bottles. Among those living in low-income homes, men

tended to need help more often than women with reading and writing activities (see Appendix Table 17). However, most women and men, especially those from non-low-income homes, reported that they never require assistance with these literacy tasks.

Figure 2.4 Working-age adults who need help with various literacy tasks, by income status, Canada, 1994



When asked to assess their own reading, writing and mathematical skills needed in daily life, working-age adults from low-income households were less likely than those from non-low-income households to rate their skills as excellent (see Table 2.11). The difference was greatest for writing skills; 53% of those from non-low-income homes rated these skills as excellent compared with 25% of those from low-income homes. When asked to rate their satisfaction with their skills, many working-age adults from low-income and non-low-income homes were very satisfied with their reading and writing skills, although a larger proportion from non-low-income homes expressed this level of satisfaction (see Figure 2.5).

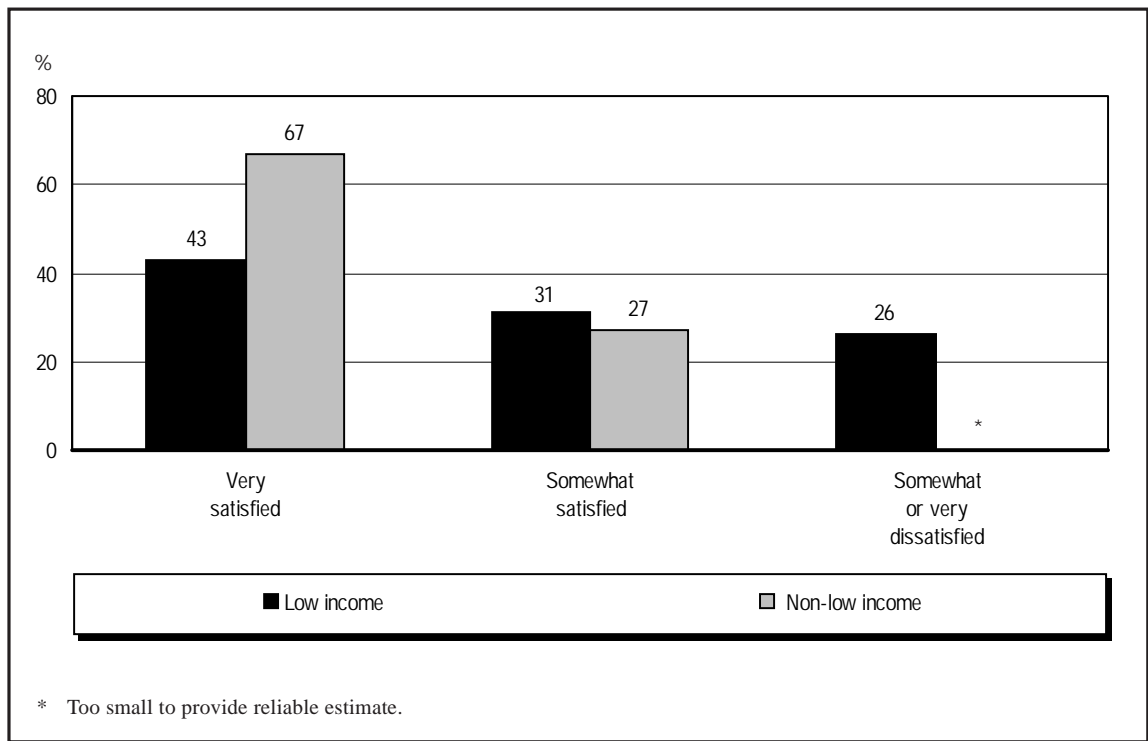
Table 2.11 Self-assessment of literacy skills among working-age adults, by income status, Canada, 1994

	Excellent (%)	Good (%)	Moderate or poor (%)
How would you rate your reading skills needed in daily life?			
Low income	40	33	27
Non-low income	65	28	...
How would you rate your writing skills needed in daily life?			
Low income	25	40	35
Non-low income	53	33	15
How would you rate your mathematical skills needed in daily life?			
Low income	41	33	26
Non-low income	50	39	...

... Sample size too small to provide reliable estimate.

Patterns of literacy practices and self-assessment of literacy outside of paid work are similar to those on the job. Working-age adults from low-income households were less likely than their counterparts from non-low-income households to engage in literacy practices, and were less likely to assess their literacy skills as adequate. However, many adults from both types of households were not heavily involved in literacy activities. Acquiring, maintaining and improving literacy skills, like any other skill, is a lifelong process. Literacy skills are maintained and strengthened through regular use in everyday life, both at home and in the paid workplace. If individuals do not regularly use these skills, they risk seeing their literacy abilities erode. Those with marginal skills and those whose skills deteriorate through lack of use may find it increasingly difficult to participate to their full potential in the labour market and in their communities. For economically disadvantaged individuals, a decline in literacy skills could create doubly jeopardizing conditions.

Figure 2.5 Satisfaction with literacy skills among working-age adults, by income status, Canada, 1994



Chapter 3

Economic security and intergenerational aspects of literacy skills acquisition

Maintaining and improving literacy skills by using them is essential for children as well as adults. Studies show that the pre-school and school years are important stages in developing language skills and cognition. During these years, parents play a key role in their children's acquiring and refining of literacy and other basic skills. Parents' own literacy skills and practices are important factors in their children's literacy skills development and practices (Taylor 1983; Morrow 1995). Members of an economically disadvantaged family could find it more difficult to engage in literacy-enhancing practices and activities.

The cultural deficit perspective of literacy development in low-income families has dominated the field of family and intergenerational literacy. This viewpoint tends to blame low-income and non-mainstream parents for not having the right skills, values and goals to provide literacy-enhancing environments that help their children succeed at school and in the workplace (Auerbach 1995). However, a growing body of literature challenges the cultural deficit theory. A social-contextual approach to family literacy has emerged, which counters the cultural deficit hypothesis and acknowledges the influence of families' complex social and economic reality on literacy development and practices (Auerbach 1989; Morrow and Paratore 1993). Research shows that, while low-income families may be less able to engage in literacy-enhancing activities because of a lack of financial resources and limited opportunities, they nonetheless try to create contexts for literacy development and encourage literacy practices (Taylor and Dorsey-Gaines 1982; Payne, Whitehurst and Angell 1994; Elish-Piper 1996–1997).

Economic security and literacy practices in homes with children

The IALS enables us to examine the relationship between economic security and the literacy practices of parents and their children. Most of the indicators from the survey focus on reading-related practices. The presence of reading material in the home may encourage both parents and children to pursue literacy activities. While parents from non-low-income households with children between the ages of 6 and 18 were more likely than those from low-income households to have reading material in the home (see Figure 3.1), the differences were slight, except for the presence of daily newspapers—70% of non-low-income homes and 48% of low-income homes received daily newspapers. Although reading material was more likely to be found in non-low-income homes than in low-income homes, it was far from absent in low-income homes. Indeed, almost all low-income homes had a dictionary, a sizeable majority owned more than 25 books or had weekly newspapers or magazines, a substantial number owned a multi-volume encyclopedia, and many had daily newspapers.

The sources from which children from low-income and non-low-income homes obtained books were also similar, although a higher proportion of children from non-low-income homes made use of each source (see Table 3.1). Children from both types of households most often

obtained their books from school libraries. Purchases by parents and borrowing from public libraries were the next most often mentioned sources for both low-income and non-low-income homes. These findings show that most children, regardless of economic circumstances, have access to reading material at home, giving them at least some of the conditions needed to engage in literacy practices.

Figure 3.1 Reading material found in households in which children aged 6 to 18 are present, by income status, Canada, 1994

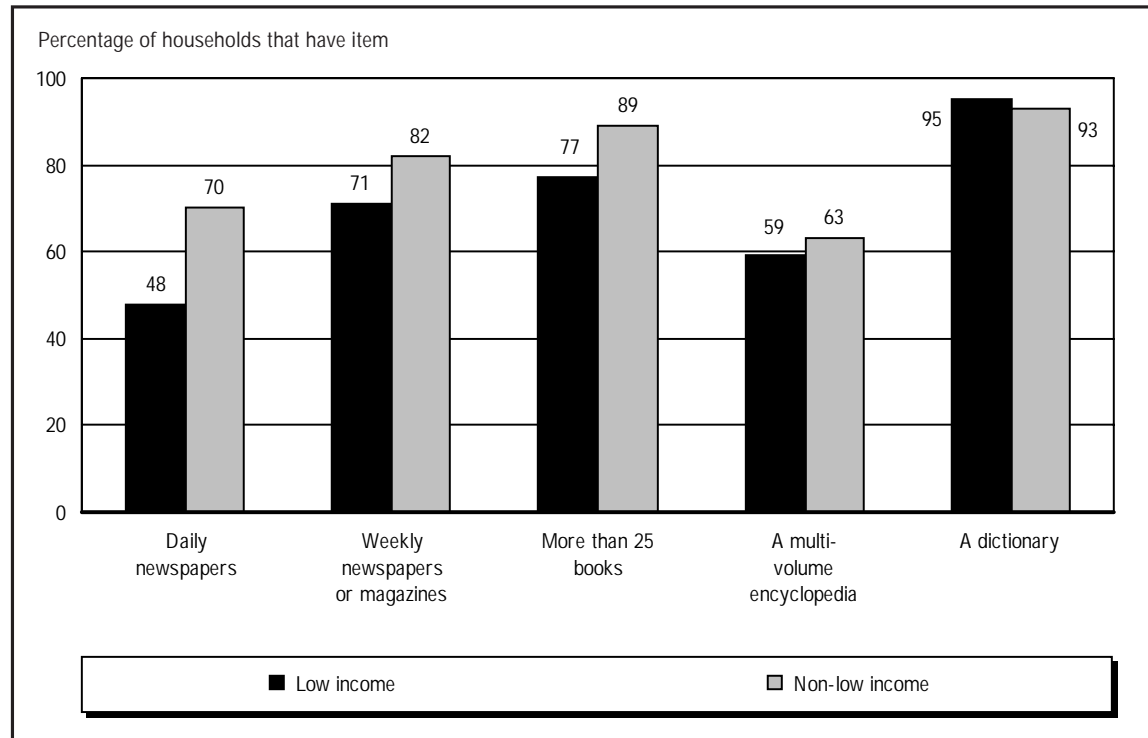


Table 3.1 Sources of books read by children in low-income and non-low-income households, Canada, 1994

When this child reads, where does he/she get books?	Low income (%)	Non-low income (%)
School library	71	83
Parent purchase	61	74
Public library	52	64
Gifts	31	57

Parents, through their own practices, play a key role in creating an environment in the home that fosters their children’s literacy practices and activities. In both low-income and non-low-income homes, a similar proportion of parents with children between the ages of 6 and 18 read books daily (see Table 3.2). However, parents from non-low-income households were almost twice as likely as those from low-income households to read newspapers or magazines every day. Whether from low-income or non-low-income households, parents tended to make use of a public library at least every month (26% and 27% respectively), although a large number never made use of a public library (56% and 45% respectively—table not shown). Parents from low-income homes spent more time watching television than did those from non-low-income homes. Parents from low-income households had a much higher propensity than those from non-low-income households to watch two hours or more of television each day (see Table 3.3).

Table 3.2 Literacy practices of parents with children aged 6 to 18, by income status, Canada, 1994

How often do you:	Daily (%)	Weekly (%)	Monthly (%)	Several times per year or less (%)
Read newspapers or magazines?				
Low income	39	44	...	...
Non-low income	71	23	...	...
Read books?				
Low income	33	12	...	43
Non-low income	36	16	15	34

... Sample size too small to provide reliable estimate.

Table 3.3 Television viewing patterns among parents with children aged 6 to 18, by income status, Canada, 1994

How much time do you usually spend each day watching television?	Up to two hours a day (%)	Two hours or more a day (%)
Low income	47	53
Non-low income	66	34

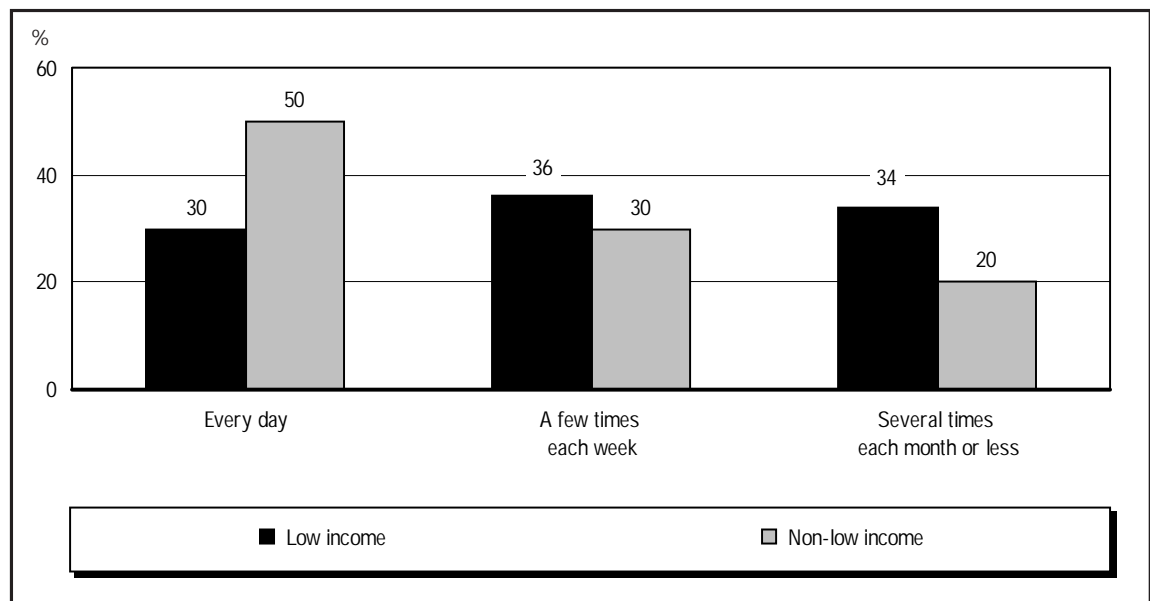
Parental support for, and encouragement of, literacy-related activities is an important factor in the development of children's literacy practices. Evidence from the IALS indicates that parents from non-low-income households are only slightly more likely to encourage the development of their children's reading habits (see Table 3.4). While a larger proportion of children from non-low-income homes often saw their parents read and learned to read themselves before reaching Grade 1, an examination of other literacy-related activities reveals only slight differences between low-income and non-low-income homes. For example, children from low-income and non-low-income households were almost as likely to choose the books they read as well as have their own books and a place to keep them. Similarly, children from both types of households were almost as likely to have a certain amount of time set aside each day for reading at home, and to be limited in the amount of time they were allowed to watch television. The relatively low scores for these last two indicators, however, point to disturbing patterns in literacy practices and habits of children in both types of households. Indeed, a significant number of children, regardless of their economic circumstances, did not have dedicated time to read at home, and many did not have limits set on the number of hours of television they watched each day.

Table 3.4 Households with children aged 6 to 18 years present: Parents' responses to various statements regarding literacy, by income status, Canada, 1994

Percentage of parents indicating each of the following statements is true:	Low income (%)	Non-low income (%)
Your children often see you or your spouse reading	79	94
Your children learned to read before Grade 1	47	58
Your children have a certain amount of time set aside each day for reading at home	50	53
Your children are limited in the amount of time you allow them to watch television	56	59
Your children have their own books and a place to keep them	94	98
Your children often choose the books they read	90	94

According to parents' assessments, the reading habits of children from both types of homes vary considerably. Indeed, children from low-income households tend to read less frequently than children from non-low-income households. As shown in Figure 3.2, almost one-third of the parents from low-income homes with children between 6 and 18 years of age reported that their youngest child read every day compared with half of the parents from non-low-income homes. In addition, more parents from low-income homes than non-low-income homes reported that their youngest child read infrequently. Notwithstanding these significant differences between types of households, the data point to a disturbing situation. Many children (50%) from non-low-income households did not read daily, and many (20%) read infrequently. While fewer parents from low-income than non-low-income households expressed a high level of satisfaction with the way their youngest child read, the difference was not large (not illustrated).

Figure 3.2 Frequency with which children aged 6 to 18 read for pleasure (as reported by parent), by income status, Canada, 1994



Clearly, there are links between household economic security and parents' and children's literacy practices and activities. Our analysis of several indicators of such practices and activities in the home points to differences between low-income and non-low-income households, but in many cases the differences are small. While it appears that economic circumstances impose some constraints on literacy practices and activities in the home, parents and children from low-income homes are obviously finding ways to develop literacy skills despite financial obstacles. These findings suggest that a social-contextual approach, rather than a deficit perspective, provides a stronger framework for understanding the complex nature of family literacy. The IALS data do not allow, however, for a more thorough analysis that would take into account the key role of other factors, such as the school environment and health and housing conditions, in the practices of family literacy.¹⁵ In addition, because the IALS is not longitudinal, we are not able to gauge the impact of differences in the home and school environments on children's literacy skills and on their long-term education and labour market outcomes.

Our analysis nevertheless underlines a worrisome situation concerning literacy practices and activities in many homes with children. Indeed, many parents and children participate only in a limited way in literacy-enhancing activities. Although the list of practices and activities covered by the IALS is not exhaustive, the data nonetheless highlight potential problems for current and future labour market participants, given rapidly-changing employment structures and the shift to an information-based economy.

Conclusion

This study has clearly established a link between literacy and economic security. Our analysis unequivocally shows that, compared with individuals possessing weaker literacy skills, those with stronger skills are more likely to participate in the labour market, reap greater financial benefits and face a lower risk of becoming economically disadvantaged. Conversely, those with weaker skills are more likely to be unemployed, work in lower-paying jobs and live in low-income households. Nevertheless, while literacy is strongly associated with economic life chances, this relationship is not as straightforward when gender is taken into account. Both women and men with higher literacy abilities are better rewarded than their counterparts with marginal abilities. However, men tend to achieve greater returns than women on investments in their literacy. Most startling is that women with stronger literacy skills sometimes fare no better than men with weaker skills. The gender-segregated nature of the labour market and women's predominant responsibilities for household work and child care, as well as differences in labour market experience and educational attainment profiles, help explain these disparities.

The findings from this study also point to a connection between economic security and the practice of literacy both on the job and outside of paid work. Economically disadvantaged adults receive less training and education and engage less in various other practices that favour the development of literacy abilities. A gender analysis indicates that men tend to receive more work-related training than do women, and have a greater opportunity to practice numeracy-related tasks on the job. Women are more likely to pursue reading practices outside of paid work.

Finally, the study has highlighted the relationship between the economic security of parents and their literacy practices, as well as those of their children. Parents and children in low-income households participate somewhat less in literacy-enhancing activities than do those who enjoy a higher standard of living. Clearly, household economic status and family literacy practices are interrelated.

The strong link between literacy and economic security shown in this study should concern policy makers, especially in the context of global economic restructuring. The new economy is characterized, not only by an explosion in the production, dissemination and use of information, but also by a polarization of the labour market into good jobs and bad jobs, and by high levels of unemployment and underemployment. Because strong literacy skills are key to success in the information-based economy, those with weak literacy abilities will have more difficulty gaining a solid foothold in the labour market and achieving economic well-being. Furthermore, if adults with poor literacy skills are not able to secure a good position in the labour market, they will not be given opportunities to exercise and develop their literacy skills. This, in turn, will limit their prospects for economic success. Those who are already economically marginalized will find themselves in an especially precarious position in this brave new world of words. Women may benefit from the shift towards an information-based economy that values literacy skills. However, because many women already have the strong literacy skills needed to succeed in the new economy, increasing their literacy skills will not, in itself, be sufficient to reduce their greater economic marginalization. Women's labour force potential cannot be fully realized in the context of a gender-segregated labour market and an unequal division of household work and child care responsibilities. Any policy intervention will need to take this reality into account.

The lack of access to job-related education and training programs for adults with poor literacy skills and those who are economically disadvantaged could exacerbate the difficulties these individuals encounter in securing a decent position in the labour market. This could lead to greater social and economic inequality. Even though lifelong learning has been placed on the policy agenda, insufficient attention has been paid to the polarized nature of job-related training

and education and its effects on individuals' economic success and on the Canadian economy's performance.

The differential distribution of literacy and unequal access to literacy-enhancing opportunities matter because these processes contribute to different outcomes for individuals. Poor literacy skills constrain the economic and social participation of many Canadians. While literacy does not of itself create a just and egalitarian society, it does provide the means for greater participation in all spheres of society. Low levels of literacy can limit individuals' ability to take part in decision-making and thus exercise their fundamental citizenship rights. Moreover, because the outcomes of one generation affect the opportunities of the next, care must be taken to ensure that children have sufficient and equitable access to literacy-enhancing experiences, regardless of their socio-economic background, in order to prevent sowing the seeds of social exclusion at an early age.

The maintenance and enhancement of literacy skills is an important priority, not only for individuals and families, but also for firms and entire countries. The capacity of firms and countries to take advantage of opportunities in the new economy depends, among other things, on the knowledge and skills of the population, including the foundation skill of literacy. Because paid work is central to most people's lives, workplace and labour market policies are instrumental in efforts to seriously address literacy issues. It is therefore in the best interests of employers and governments to develop and implement policies that help maintain and enhance people's literacy skills. The creation of good jobs that allow and encourage individuals to make use of, and expand, their skills should be one of the key policy interventions.

Finally, it is clear that policy development around literacy concerns must occur within a broader social and economic context. The problem of poor literacy skills is not simply an issue of education, nor is it only a private, individual matter. It is also an indicator of deeper social and economic inequalities that characterize contemporary society. Because the improvement of literacy skills alone will not solve systemic inequalities, policies designed to address literacy concerns will have limited effect unless they also include a serious attack on economic insecurity and other inequities.

Endnotes

1. The IALS was a seven-country initiative conducted in the fall of 1994. The goal of the survey was to determine the level and distribution of literacy among the adult population of these countries.
2. The IALS provides representative proficiency data for the non-institutional civilian population of Canada aged 16 and over. Residents of the Yukon and Northwest Territories and residents of Indian reserves were excluded from the study.
3. For additional discussion of the IALS methodology, see OECD and Statistics Canada 1995; Statistics Canada and Human Resources Development Canada 1996.
4. Evidence provided through personal correspondence with Statistics Canada's Household Surveys Division.
5. The 1995 Survey of Consumer Finances (based on activity in the 1994 calendar year) was used in this comparison. The 1995 SCF was chosen over the 1994 SCF because the former includes a revised population weight based on the 1991 Census.
6. IALS questions regarding literacy practices on the job were answered by approximately 3,400 respondents who had worked within the year prior to the survey. Eighty of these respondents were aged 65 or older and were included in our analysis. IALS questions regarding literacy practices among children were asked of parents with children aged 6 to 18. Five of these respondents were aged 65 or older, and were included in our analysis.
7. The efforts of the international movement ATD Quart Monde (1983) were particularly instrumental in drawing attention to the relationship between economic disadvantage and illiteracy in industrialized countries.
8. In the higher income categories, 53% of individuals with Level 4/5 literacy skills had incomes of \$60,000 or more, and 23% had incomes of \$80,000 or more. In contrast, 25% of those with Level 2 skills had incomes of \$60,000 or more, and only 12% had incomes of \$80,000 or more. Too few people at Level 1 had incomes in these ranges to provide reliable estimates.
9. Seven IALS respondents reported household incomes of \$200,000 or more. The inclusion of these cases caused very high standard deviations when average household incomes were calculated. To reduce standard deviations to acceptable levels, these cases were excluded from the analysis of household income.
10. Two IALS respondents reported personal incomes of \$200,000 or more. The inclusion of these cases caused very high standard deviations when average personal incomes were calculated. To reduce standard deviations to acceptable levels, these cases were excluded from the analysis of personal income.
11. Studies have systematically shown that while having a job reduces the likelihood of economic insecurity, paid employment does not always provide an escape from it. See, for example, Evans and Chawla 1990; O'Connor and Smeeding 1993; Crompton 1995; Lochhead and Shalla 1996; and Schellenberg and Ross 1997.
12. The federal Unemployment Insurance program has been redesigned and its name changed to Employment Insurance; when the IALS was conducted (1994), the program was known as Unemployment Insurance.
13. For an insightful analysis of how literacy is linked to earnings differentials between women and men and to their labour market position, see Raudenbush, Kasim, Eamsukawat and Miyazaki 1996; and Raudenbush and Kasim 1996.
14. Using IALS data, Willms (1997) examines the link between the literacy skills of Canadian youth and their family background and personal characteristics.
15. Many studies have examined the link between children's learning and their environment, both at home and at school. See, for example, Hess 1989; Centre for International Statistics 1994.

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Appendix

Table 1a Incidence of low income (percentage of individuals residing in low-income households), by level of document literacy and sex, Canada, 1994

Document scale	Working-age adults (%)		
	All	Men	Women
Level 1	48	45	50
Level 2	24	19	29
Level 3	15	11	20
Level 4/5	7	...	...

... Sample size too small to provide reliable estimate.

Table 1b Incidence of low income (percentage of individuals residing in low-income households), by level of quantitative literacy and sex, Canada, 1994

Quantitative scale	Working-age adults (%)		
	All	Men	Women
Level 1	47	43	52
Level 2	23	17	28
Level 3	17	13	20
Level 4/5	7	...	...

... Sample size too small to provide reliable estimate.

Table 2a Incidence of low income and distribution across household income categories among working-age adults, by level of document literacy, Canada, 1994

Document scale	Percentage who were living in low-income households	Percentage of working-age adults who reside in households with incomes of:			
		Less than \$15,000	\$15,000 to \$29,999	\$30,000 to \$44,999	\$45,000 or more
Level 1	48	29	31	18	22
Level 2	24	11	25	22	43
Level 3	15	9	14	16	61
Level 4/5	7	...	10	18	70

... Sample size too small to provide reliable estimate.

Table 2b Incidence of low income and distribution across household income categories among working-age adults, by level of quantitative literacy, Canada, 1994

Quantitative scale	Percentage who were living in low-income households	Percentage of working-age adults who reside in households with incomes of:			
		Less than \$15,000	\$15,000 to \$29,999	\$30,000 to \$44,999	\$45,000 or more
Level 1	47	28	33	19	20
Level 2	23	13	20	19	49
Level 3	17	9	17	19	56
Level 4/5	7	...	10	17	72

... Sample size too small to provide reliable estimate.

Table 3a Average household income, by level of document literacy and household size, Canada, 1994

Document scale	Average household income of working-age adults (\$)¹		
	One person in household	Two or more persons in household	All households
Level 1	14,000	31,400	29,200
Level 2	20,900	46,300	43,600
Level 3	27,300	56,400	54,600
Level 4/5	33,200	64,700	62,000

1. Dollar values have been rounded to the nearest 100.

Table 3b Average household income, by level of quantitative literacy and household size, Canada, 1994

Quantitative scale	Average household income of working-age adults (\$)¹		
	One person in household	Two or more persons in household	All households
Level 1	14,100	31,500	28,800
Level 2	19,300	49,000	46,400
Level 3	26,600	52,500	50,400
Level 4/5	37,700	66,500	64,500

1. Dollar values have been rounded to the nearest 100.

Table 4a Incidence of low income and distribution across personal income categories among working-age adults, by level of document literacy, Canada, 1994

Document scale	Percentage who were living in low-income households	Percentage of working-age adults with personal incomes of:			
		Less than \$10,000	\$10,000 to \$19,999	\$20,000 to \$29,999	\$30,000 or more
Level 1	48	36	35	18	11
Level 2	24	29	23	15	33
Level 3	15	23	17	27	33
Level 4/5	7	26	12	12	50

Table 4b Incidence of low income and distribution across personal income categories among working-age adults, by level of quantitative literacy, Canada, 1994

Quantitative scale	Percentage who were living in low-income households	Percentage of working-age adults with personal incomes of:			
		Less than \$10,000	\$10,000 to \$19,999	\$20,000 to \$29,999	\$30,000 or more
Level 1	47	34	34	19	14
Level 2	23	29	26	20	25
Level 3	17	31	17	16	36
Level 4/5	7	16	10	21	54

Table 5a Incidence of low income and distribution across personal income categories among working-age adults, by level of document literacy and sex, Canada, 1994

Document scale	Percentage who were living in low-income households	Percentage of working-age adults with personal incomes of:			
		Less than \$10,000	\$10,000 to \$19,999	\$20,000 to \$29,999	\$30,000 or more
Men					
Level 1	45	24	34	23	19
Level 2	19	19	...	18	47
Level 3	11	15	12	19	55
Level 4/5	...	...	...	...	69
Women					
Level 1	50	48	36	...	...
Level 2	29	42	32	...	...
Level 3	20	32	23	34	11
Level 4/5	...	33	19	18	31

... Sample size too small to provide reliable estimate.

Table 5b Incidence of low income and distribution across personal income categories among working-age adults, by level of quantitative literacy and sex, Canada, 1994

Quantitative scale	Percentage who were living in low-income households	Percentage of working-age adults with personal incomes of:			
		Less than \$10,000	\$10,000 to \$19,999	\$20,000 to \$29,999	\$30,000 or more
Men					
Level 1	43	22	32	23	24
Level 2	17	19	18	22	41
Level 3	13	22	11	12	55
Level 4/5	...	...	...	...	72
Women					
Level 1	52	49	36	...	...
Level 2	28	39	34	...	...
Level 3	20	40	22	20	18
Level 4/5	...	21	16	31	32

... Sample size too small to provide reliable estimate.

Table 6a Average personal income among working-age adults, by level of document literacy and sex, Canada, 1994

Document scale	Average personal income of working-age adults (\$)¹		
	All	Men	Women
Level 1	15,800	20,500	11,000
Level 2	22,600	29,500	14,100
Level 3	24,500	31,900	17,200
Level 4/5	30,400	38,400	22,300

1. Dollar values have been rounded to the nearest 100.

Table 6b Average personal income among working-age adults, by level of quantitative literacy and sex, Canada, 1994

Quantitative scale	Average personal income of working-age adults (\$)¹		
	All	Men	Women
Level 1	15,800	20,200	10,200
Level 2	21,700	29,600	14,100
Level 3	23,400	30,500	16,900
Level 4/5	33,500	40,700	24,500

1. Dollar values have been rounded to the nearest 100.

Table 7a Main activity of working-age adults at time of survey, by level of document literacy, Canada, 1994

Document scale	Employed (%)	Unemployed (%)	Homemaker (%)	Student (%)	Other (%)
Level 1	43	14	22	...	18
Level 2	62	9	11	9	8
Level 3	69	6	12	9	5
Level 4/5	75	...	...	12	...

... Sample size too small to provide reliable estimate.

Table 7b Main activity of working-age adults at time of survey, by level of quantitative literacy, Canada, 1994

Quantitative scale	Employed (%)	Unemployed (%)	Homemaker (%)	Student (%)	Other (%)
Level 1	44	16	21	...	16
Level 2	62	9	11	9	9
Level 3	66	6	12	12	5
Level 4/5	80	...	...	8	...

... Sample size too small to provide reliable estimate.

Table 8a Number of weeks working-age adults were employed during the previous year, by level of document literacy and sex, Canada, 1994

Document scale	Percentage of working-age adults who were:		
	Not employed during the year	Employed part year (1 to 48 weeks)	Employed full year (49 weeks or more)
All			
Level 1	45	24	31
Level 2	25	25	51
Level 3	17	22	61
Level 4/5	11	24	64
Men			
Level 1	34	31	35
Level 2	16	27	57
Level 3	...	22	71
Level 4/5	...	24	68
Women			
Level 1	55	18	27
Level 2	34	22	44
Level 3	27	22	51
Level 4/5	14	25	61

... Sample size too small to provide reliable estimate.

Table 8b Number of weeks working-age adults were employed during the previous year, by level of quantitative literacy and sex, Canada, 1994

Quantitative scale	Percentage of working-age adults who were:		
	Not employed during the year	Employed part year (1 to 48 weeks)	Employed full year (49 weeks or more)
All			
Level 1	43	23	33
Level 2	24	26	50
Level 3	20	21	59
Level 4/5	9	25	66
Men			
Level 1	30	33	37
Level 2	17	24	59
Level 3	...	23	67
Level 4/5	...	25	69
Women			
Level 1	58	...	29
Level 2	31	28	41
Level 3	29	20	51
Level 4/5	12	25	63

... Sample size too small to provide reliable estimate.

Table 9a Incidence of low income and labour force activities among working-age adults during the year, by level of document literacy, Canada, 1994

Document scale	Percentage who were living in low-income households	Percentage of working-age adults living in low-income households who were:	
		Not employed during the year	Employed for part or all of the year
Level 1	48	66	34
Level 2	24	65	35
Level 3	15	42	48
Level 4/5	7	...	...

... Sample size too small to provide reliable estimate.

Table 9b Incidence of low income and labour force activities among working-age adults during the year, by level of quantitative literacy, Canada, 1994

Quantitative scale	Percentage who were living in low-income households	Percentage of working-age adults living in low-income households who were:	
		Not employed during the year	Employed for part or all of the year
Level 1	47	71	29
Level 2	23	52	48
Level 3	17	52	48
Level 4/5	7	...	...

... Sample size too small to provide reliable estimate.

Table 10a Average earnings of working-age adults, by level of document literacy and sex, Canada, 1994

Document scale	Percentage with earnings	Of those with earnings, average amount received (\$)¹	
		All workers	Full-time, full-year workers
All			
Level 1	50	18,900	25,700
Level 2	73	24,300	33,100
Level 3	80	25,300	32,100
Level 4/5	88	30,300	42,600
Men			
Level 1	62	24,100	36,300
Level 2	83	29,900	38,200
Level 3	93	30,600	36,600
Level 4/5	93	36,400	45,500
Women			
Level 1	40	12,000	13,800
Level 2	62	15,900	23,400
Level 3	68	18,100	24,100
Level 4/5	84	23,900	37,500

1. Dollar values have been rounded to the nearest 100.

Table 10b Average earnings of working-age adults, by level of quantitative literacy and sex, Canada, 1994

Quantitative scale	Percentage with earnings	Of those with earnings, average amount received (\$)¹	
		All workers	Full-time, full-year workers
All			
Level 1	50	17,300	23,500
Level 2	73	24,000	33,000
Level 3	79	24,700	33,500
Level 4/5	90	32,300	41,000
Men			
Level 1	67	20,300	29,600
Level 2	80	32,900	40,200
Level 3	92	28,800	36,500
Level 4/5	93	38,900	45,900
Women			
Level 1	32	10,900	12,800
Level 2	67	14,200	20,200
Level 3	67	19,400	28,200
Level 4/5	86	24,700	33,200

1. Dollar values have been rounded to the nearest 100.

Table 11a Sources of personal income of working-age adults, by level of document literacy and sex, Canada, 1994

Document scale	Percentage of personal income from employment earnings	Percentage of personal income from other sources
All		
Level 1	48	52
Level 2	65	35
Level 3	75	25
Level 4/5	81	19
Men		
Level 1	55	45
Level 2	71	29
Level 3	84	16
Level 4/5	85	15
Women		
Level 1	41	59
Level 2	57	43
Level 3	64	36
Level 4/5	77	23

Table 11b Sources of personal income of working-age adults, by level of quantitative literacy and sex, Canada, 1994

Quantitative scale	Percentage of personal income from employment earnings	Percentage of personal income from other sources
All		
Level 1	46	54
Level 2	69	31
Level 3	71	29
Level 4/5	83	17
Men		
Level 1	54	46
Level 2	75	25
Level 3	82	18
Level 4/5	86	14
Women		
Level 1	34	66
Level 2	63	37
Level 3	61	39
Level 4/5	80	20

Table 12a Sources of personal income of working-age adults, by level of document literacy and sex, Canada, 1994

Document scale	Percentage of individuals with income from Unemployment Insurance (UI) ¹	Percentage of individuals with income from Social Assistance (SA) ¹	Percentage of individuals who <i>did not</i> receive income from either UI or SA
All			
Level 1	22	23	57
Level 2	22	11	69
Level 3	15	7	79
Level 4/5	14	...	83
Men			
Level 1	24	21	58
Level 2	22	...	69
Level 3	15	...	83
Level 4/5	...	...	85
Women			
Level 1	20	25	57
Level 2	22	13	69
Level 3	15	12	75
Level 4/5	16	...	80

1. Information on receipt of UI and SA income is available for only a subgroup of IALS respondents, and should be interpreted with caution. Information is not available for 1,044 respondents, all of whom were Franco-Ontarians.
 ... Sample size too small to provide reliable estimate.

Table 12b Sources of personal income of working-age adults, by level of quantitative literacy and sex, Canada, 1994

Quantitative scale	Percentage of individuals with income from Unemployment Insurance (UI) ¹	Percentage of individuals with income from Social Assistance (SA) ¹	Percentage of individuals who <i>did not</i> receive income from either UI or SA
All			
Level 1	19	24	59
Level 2	21	11	70
Level 3	17	7	77
Level 4/5	14	...	83
Men			
Level 1	24	20	59
Level 2	22	...	70
Level 3	...	...	84
Level 4/5	17	...	81
Women			
Level 1	14	28	59
Level 2	20	13	70
Level 3	21	10	70
Level 4/5	12	...	85

1. Information on receipt of UI and SA income is available for only a subgroup of IALS respondents, and should be interpreted with caution. Information is not available for 1,044 respondents, all of whom were Franco-Ontarians.
 ... Sample size too small to provide reliable estimate.

Table 13a Job-related training and education received by working-age adults, by document literacy and sex, Canada, 1994

Document scale	Percentage of working-age adults who received any <i>job-related</i> training or education in previous 12 months		
	All	Men	Women
Level 1	13	...	...
Level 2	27	34	20
Level 3	37	42	31
Level 4/5	57	60	55

... Sample size too small to provide reliable estimate.

Table 13b Job-related training and education received by working-age adults, by quantitative literacy and sex, Canada, 1994

Quantitative scale	Percentage of working-age adults who received any <i>job-related</i> training or education in previous 12 months		
	All	Men	Women
Level 1	15	...	...
Level 2	29	32	27
Level 3	40	46	34
Level 4/5	51	57	43

... Sample size too small to provide reliable estimate.

Table 14 Literacy practices on the job by employed individuals, by income status and sex, Canada, 1994

How often do you read or use information from each of the following as part of your main job:	At least once a week (%)	Infrequently, rarely or never (%)
Letters or memos?		
All		
Low income	46	54
Non-low income	76	24
Men		
Low income	43	57
Non-low income	73	27
Women		
Low income	51	49
Non-low income	81	19
Reports, articles, magazines or journals?		
All		
Low income	34	66
Non-low income	62	38
Men		
Low income	...	67
Non-low income	59	41
Women		
Low income	...	63
Non-low income	65	35
Manuals, reference books or catalogues?		
All		
Low income	32	68
Non-low income	54	46
Men		
Low income	...	71
Non-low income	57	43
Women		
Low income	...	64
Non-low income	51	49
Diagrams or schematics?		
All		
Low income	23	77
Non-low income	36	64
Men		
Low income	...	65
Non-low income	44	56
Women		
Low income	...	91
Non-low income	24	76
Bills, invoices, spreadsheets or budget tables?		
All		
Low income	40	60
Non-low income	51	49
Men		
Low income	46	54
Non-low income	54	46
Women		
Low income	...	67
Non-low income	47	53
Directions or instructions for medicines, recipes or other products?		
All		
Low income	28	72
Non-low income	32	68
Men		
Low income	...	78
Non-low income	29	71
Women		
Low income	...	64
Non-low income	35	65

... Sample size too small to provide reliable estimate.

Table 15 Literacy practices on the job by employed individuals, by income status and sex, Canada, 1994

How often do you write or fill out each of the following as part of your main job:	At least once a week (%)	Infrequently, rarely or never (%)
Letters or memos?		
Men		
Low income	...	70
Non-low income	57	43
Women		
Low income	38	62
Non-low income	62	38
Forms, bills, invoices or budgets?		
Men		
Low income	41	59
Non-low income	49	51
Women		
Low income	...	64
Non-low income	48	52
Reports or articles?		
Men		
Low income	...	69
Non-low income	49	51
Women		
Low income	...	82
Non-low income	41	59
Estimates or technical specifications?		
Men		
Low income	...	71
Non-low income	38	62
Women		
Low income	...	83
Non-low income	19	81

... Sample size too small to provide reliable estimate.

Table 16 Numeracy practices on the job by employed individuals, by income status and sex, Canada, 1994

In your main job how often do you use arithmetic or mathematics:	At least once a week (%)	Infrequently, rarely or never (%)
To measure or estimate the size or weight of objects?		
Men		
Low income	63	37
Non-low income	56	44
Women		
Low income	...	71
Non-low income	34	66
To calculate prices, costs or budgets?		
Men		
Low income	40	60
Non-low income	48	52
Women		
Low income	36	64
Non-low income	52	48

... Sample size too small to provide reliable estimate.

Table 17 Percentage of working-age adults who require assistance with various literacy practices, by income status and sex, Canada, 1994

How often do you need help from others with:	Sometimes/Often (%)	Never (%)
Reading newspaper articles?		
Men		
Low income	28	72
Non-low income	...	96
Women		
Low income	23	77
Non-low income	...	96
Reading information from government agencies and other institutions?		
Men		
Low income	36	64
Non-low income	13	87
Women		
Low income	33	67
Non-low income	15	85
Filling out forms such as applications or bank deposit slips?		
Men		
Low income	38	62
Non-low income	9	91
Women		
Low income	25	75
Non-low income	9	91
Reading instructions such as on a medicine bottle?		
Men		
Low income	31	69
Non-low income	6	94
Women		
Low income	21	79
Non-low income	...	97
Doing basic arithmetic, that is, adding, subtracting, multiplying and dividing?		
Men		
Low income	...	84
Non-low income	...	95
Women		
Low income	...	85
Non-low income	...	95

... Sample size too small to provide reliable estimate.

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.