



Literacy Foundation  
Fondation pour l'alphabétisation

# REPORT SUMMARY

May, 2005

## Background to the Survey

The *Adult Literacy and Life Skills (ALL)* Survey, released May 11, 2005 and presented by the Organization for Economic Co-operation and Development (OECD) and Statistics Canada, uses data collected in 2003 and further builds the picture of literacy in this country and in Bermuda, Italy, Norway, the Mexican State of Nuevo Leon, Switzerland and the United States.

These findings add to the fund of knowledge gleaned in three earlier rounds of data collection: *Literacy, Economy and Society: Results of the first International Adult Literacy Survey (IALS) Database* (OECD and Statistics Canada, 1995), with data collected in seven countries in the fall of 1994; *Literacy Skills for the Knowledge Society: Further results on the International Adult Literacy Survey Database* (OECD, Human Resources Development Canada and the Minister responsible for Statistics Canada, 1997), with data collected in 1996; and *Literacy in the Information Age: Final Report on the International Adult Literacy Survey Database* (OECD and Statistics Canada, 2000), with data collected in 1998.

The three *IALS* surveys painted a world with a significant challenge of low literacy. It also afforded an opportunity to compare Canada's literacy performance with 21 other countries, and to gain insight into literacy issues within our country.

This Summary highlights the key points arising from the *ALL* Survey, an international comparison between Canada and the six other countries. A follow-up report, to be released in October, 2005, will provide further details concerning literacy performance in Canada and the provinces and territories.

# Learning a Living: First results of the Adult Literacy and Life Skills (ALL) Survey

## International Findings:

*Canada and six other countries*

Ottawa and Paris (Statistics Canada and OECD, 2005)

### 1. Key Goals of the ALL Survey

- **To shed light on the twin processes of skill gain and loss in adult populations.** In comparing data collected from countries which were also included in the earlier *IALS* surveys, researchers wanted to discover changes in the level (See Literacy Levels in Terminology box, page 2) and distribution of literacy skills. In general, one expects the quality of literacy skills in the population to increase over time in response to increases in the incidence, average duration and quality of education and adult learning. But gains or losses in literacy skills can occur as a result of many factors, including the choices made by individual learners and the learning and skill maintenance opportunities afforded at home, at work, and in the community.
- **To profile and compare, for the first time, the level and distribution of directly assessed numeracy skills among adult populations in participating countries.** *ALL* replaces a "quantitative literacy domain" used in *IALS* with a broader and more robust numeracy measure that better reflects the various numeracy challenges faced by adults in their daily lives.
- **To profile and compare the level and distribution of problem-solving skills among the adult populations.** Beyond improving the measure of numeracy skill, *ALL* set about to develop a theoretical framework for measuring additional skill domains including problem-solving skills.
- **To collect comparable data on participation in formal adult education.** The *ALL* background questionnaire was designed to profile formal adult

education and training, and forms of informal adult learning, their social distribution and impact on individual outcomes such as employability and wages.

An important assumption made in the survey is that different life contexts – work, home and the community – impose skill demands on individuals. *ALL* also sought to understand how skills influence the level and distribution of outcomes, whether economic, social or environmental.

### 2. Comparative Profiles of Adult Skills

*ALL* compares the levels and distributions of adult skills in prose literacy, document literacy, numeracy and problem solving (See Four Scales of Competency Reported box, page 2). It also tracks changes in prose and document literacy over time for those countries that also participated in the *IALS* survey – Canada, Norway, Switzerland and the US.

#### Key findings:

- ▶ *ALL* results confirm *IALS* findings that there is a significant number of adults with low literacy and numeracy skills. Considering prose literacy, for example, 14.6 per cent of adults, aged 16 to 65, in Canada scored Level 1, and 27.3 per cent scored Level 2 -- for a total of 41.9 per cent scoring Levels 1 and 2 combined. In comparison, Norway has the least proportion of its population scoring Levels 1 and 2 in prose literacy (34.1 per cent), followed by Bermuda at 38.1 per cent; Switzerland, 52.4 per cent; the US, 52.6 per cent; Italy, 79.5 per cent; and Nuevo Leon, Mexico, 89 per cent. [See FIG. 1, page 2]
- ▶ Depending upon the country, between one-third and over two-thirds of adults do not attain skill Level 3, the level considered as a minimum for coping with the demands of modern life and work.
- ▶ Changes in mean country performance

## Terminology

### Literacy Levels

**Level 1:** Persons with very poor skills, where the individual may, for example, be unable to determine the correct amount of medicine to give a child from information printed on the package.

**Level 2:** People can only deal with material that is simple, clearly laid out, and in which the tasks involved are not too complex. It denotes a weak level of skill, but more hidden than Level 1. It identifies people who can read but test poorly. They may have developed coping skills to manage everyday literacy demands but their low level of proficiency makes it difficult for them to face novel demands, such as learning new job skills.

**Level 3:** The minimum skills level suitable for coping with the demands of everyday life and work in a complex, advanced society. It denotes roughly the skill level required for successful secondary school completion and college entry. Like higher levels, it requires the ability to integrate several sources of information and solve more complex problems.

**Levels 4 & 5:** People demonstrate a command of higher-order information-processing skills.

### Four Scales of Competency Reported

**Prose literacy:** The knowledge and skills needed to understand and use information from texts including editorials, news stories, brochures and instruction manuals.

**Document literacy:** The knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps, tables and charts.

**Numeracy:** The knowledge and skills required to effectively manage the mathematical demands of diverse situations. [*This numeracy scale replaces the quantitative scale used in IALS, where respondents were required to perform one or more arithmetic operations based on information contained in texts, either continuous or non-continuous.*]

**Problem-solving:** Involves goal-directed thinking and action in situations for which no routine solution procedure is available. The problem solver has a more or less well-defined goal, but does not immediately know how to reach it. The understanding of the problem situation and its step-by-step transformation, based on planning and reasoning, constitute the process of problem solving.

### Glossary of Terms

**Literacy:** Using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential.

**Lifelong learning:** The notion that learning occurs in many different contexts throughout an individual's life: in both formal and informal settings, at work, at home and in the community.

**Adult education and training:** Includes programs, courses, private lessons, correspondence courses, workshops, on-the-job training and apprenticeships.

**Informal learning:** Learning other than in the formal structure of courses, in both passive and active forms. The former involves activities such as being on a guided tour, or being sent to an organization, and the latter entails learning by oneself, trying things out, and watching others to learn from them.

(From page 1)

are not substantial, but the results show some improvement, *ALL* vs. *IALS*, among the five per cent of adults with the lowest scores.

### 3. Education and Skills

*ALL* examines the relationship between individual educational experience and observed measures of skills. While there is evidence that education plays a key role in the formation of skills, other factors are also implicated in the acquisition, maintenance and loss of skills over a lifetime. Note also that the analysis focuses on comparing the skills of younger adults with varying experiences of upper-secondary education, and on the impact of additional years and levels of post-secondary schooling.

Fig 1.

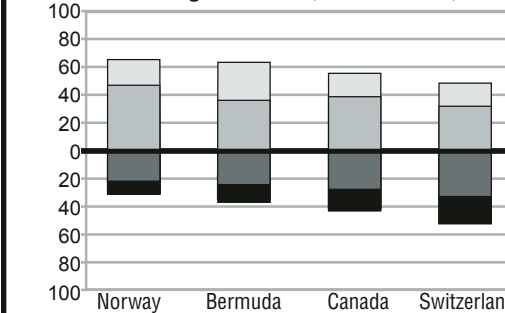
Per cent of population aged 16 to 65 at each skills level, all countries, 2003

	Level 1	Level 2	Level 3	Levels 4/5
<b>Prose literacy</b>				
Bermuda	12.5	25.6	35.6	26.3
Canada	14.6	27.3	38.6	19.5
Italy	47.0	32.5	17.0	3.5
Norway	7.9	26.2	45.3	20.6
Nuevo Leon, Mexico	43.2	45.8	10.3	0.7
Switzerland	15.9	36.3	35.7	12.1
United States	20.0	32.6	34.6	12.8
<b>Document Literacy</b>				
Bermuda	16.6	29.5	32.7	21.1
Canada	15.6	27.0	36.9	20.5
Italy	49.2	31.4	15.8	3.6
Norway	8.9	23.5	39.7	27.9
Nuevo Leon, Mexico	43.8	40.3	14.2	1.7
Switzerland	14.5	34.5	35.8	15.1
United States	20.2	32.3	32.6	15.0
<b>Numeracy</b>				
Bermuda	21.4	32.7	29.9	16.0
Canada	19.5	30.3	33.4	16.9
Italy	43.5	36.7	16.8	3.0
Norway	10.6	29.6	41.5	18.4
Switzerland	8.6	30.7	37.8	22.9
United States	26.8	31.8	28.8	12.7
<b>Problem-solving skills</b>				
Bermuda	33.1	36.8	23.6	6.5
Canada	29.7	38.8	26.2	5.4
Italy	67.8	22.8	8.1	1.2
Norway	23.3	37.5	32.0	7.2
Switzerland	28.8	37.3	26.5	7.3

Note: Nuevo Leon did not field the numeracy skills domain; Switzerland (Italian), Nuevo Leon and the US did not field the problem-solving skills domain.  
Source: Adult Literacy and Life Skills Survey, 2003

Fig 2.

Comparative distribution of skills level those aged 16 to 65, all countries, 2003



Source: Adult Literacy and Life Skills (ALL) Survey

### Key findings:

- ▶ There is a strong, positive relationship between educational attainment and skills on all domains measured, but there are also substantial variations in performance within each level of education.
- ▶ In all countries, early school leavers are most likely to score at Levels 1 or 2, compared with those who have stayed in school, and youth and young adults aged 16 to 35 with more years of post-secondary schooling on average consistently show higher skills proficiencies than those with fewer or no years of post-secondary schooling.

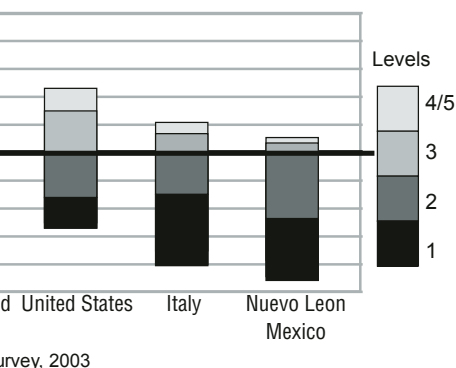
### 4. Skills and Adult Learning

*ALL* examines participation in organized forms of adult education and training as well as engagement in informal learning. In comparing with *IALS* results, it also assesses whether the increased importance given to adult learning by policy makers, the business community and other sectors, translates into increased readiness in adults to actively engage in various forms of learning. Patterns of informal learning are compared, and the role of employers, governments and individuals in financially supporting adult learning is considered.

### Key findings:

- ▶ Comparison to *IALS* indicates a marked increase in the rate of participation in adult education and training, with close to or over half of adult populations enrolled in some form of organized adult education or training during the year preceding the *ALL* interview (except for Italy, with 20 per cent participation rate). In Canada, the participation rate in adult education and training among those aged 16 to 65 increased from 36 per cent in *IALS* (1994) to 49.3 per cent in *ALL* (2003). In the US, participation rates for the same age group over the same

### Changes in the prose literacy scale for



period of time increased from 41.7 per cent to 54.6 per cent.

- ▶ Twenty-two per cent of Canadians aged 16 to 65 who scored Level 1 on the document literacy scale participated in adult education and training.
- ▶ In all countries, employer financing plays a central role in supporting opportunities to engage in lifelong learning, but countries differ markedly in the share of total adult learning that is employer-supported.

## 5. Skills and the Labour Force

*ALL* compares the difference in workers' skills between the top and bottom 25 per cent of performers, and assesses the skills supplied in the labour market. It also looks at the employability of working-age adults by comparing the likelihood of experiencing labour force inactivity and unemployment over a cycle of one year for persons at low, medium and high levels of skill. This employability analysis is also extended to include younger and older workers.

### Key finding:

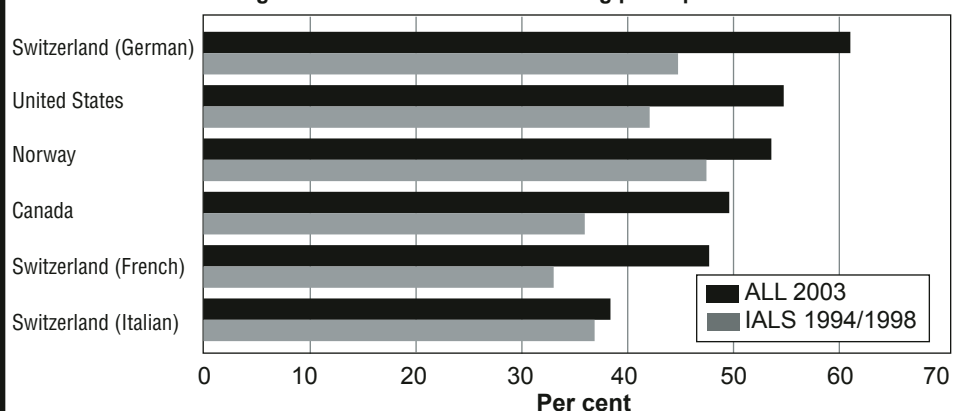
- ▶ Adults with higher levels of skill are more employable than adults with low skills. Apart from Bermuda, findings show that low-skilled adults are more likely than medium-to-high-skilled adults to experience unemployment and labour force inactivity for six or more months. In Canada and the US, people who score at Levels 1 and 2 are about two times more likely to be unemployed for six or more months than those who score at Level 3 or higher.

## 6. Skills and the Nature of the Workplace

Skills distributions of the workforce in technology- and knowledge-intensive industries, as well as the skills of workers in this sector, are compared to other sectors. The

**Fig 3.**

**Changes in adult education and training participation rates.**



Countries are ranked by the per cent of respondents receiving adult education and training in ALL 2003

Sources: Adult Literacy and Life Skills Survey, 2003

International Adult Literacy Survey, 1994-1998

relationship between workers' skills and their engagement in literacy and numeracy tasks at work is considered. *ALL* also shows that the extent of engagement in literacy and numeracy activities is strongly linked to the types of occupations in which adults are employed, and looks at the match/mismatch between workers' skills and the extent to which they engage in work tasks requiring those skills.

### Key finding:

- ▶ High and medium-high technology industries, compared with low and medium-low, have comparatively higher proportions of skilled workers.

## 7. Skills and Economic Outcomes

*ALL* examines economic outcomes associated with differences in observed skills. The rewards to literacy, numeracy and problem-solving skills on labour markets are studied with a structural model that specifies the joint determination of personal earnings, education and cognitive skills. *ALL* also looks at the likelihood of receiving social assistance transfers for individuals at different skill levels (adjusting for education, age, gender and household income levels).

### Key findings:

- ▶ In Canada and in the US, the labour market appears to separately reward both the skills measured in *ALL* and the additional schooling taken by people.
- ▶ Adults scoring Levels 1 and 2 on numeracy are more likely to obtain social assistance payments from the state (Canada, Norway, US). In Canada, adjusting for gender, age and education level, people with numeracy

Levels 1 and 2 are 2.5 times more likely to be recipients of social assistance, than those with Level 3 or more.

## 8. Skills and Information and Communications Technology (ICT)

*ALL* explores the relationship between skills and Information and Communications Technology (ICT) use and familiarity. It looks at: access rates to computers and the Internet; the relationship between ICT use and literacy skills; the determinants of ICT use, including income, age, gender, educational attainment and occupation; and the outcomes associated with the use of ICTs in combination with literacy skills.

### Key findings:

- ▶ Despite quite high computer- and Internet-access rates in most countries (about 80 per cent and 70 per cent, respectively), overall there still exists a "digital divide" within and between countries. A significant factor in the large divide in access and the use of ICTs within countries is income, with the largest drop in access rates typically occurring between the third and lowest income quartiles.
- ▶ The relationship between prose literacy and the use of computers for task-oriented purposes is strong.
- ▶ Generally speaking, respondents in Canada and the US who have medium-to-high literacy skills and are high-intensity computer users have between four and five times the odds of being in the top quartile of personal income, compared to those with low literacy and low computer use.

## 9. Skills and Immigration

*ALL* compares the skill profiles of immigrant and native-born adults, focusing especially on: the significance of immigration in OECD countries; the knowledge and skills that immigrants contribute to host countries, in terms of their educational attainment; and the extent to which educational credentials translate into usable skills of the type measured in *ALL* for the host country. In comparing education credentials and observed skills of immigrants, there appears to be an education-skills 'gap' among immigrants. In light of this, the potential role of native vs. foreign language status in explaining the gap is also considered.

### Key findings:

- ▶ A continuing shift in immigration policies toward selecting those with higher skills is evident in the data. In all countries surveyed, recent immigrants appear more likely to have completed higher than upper-secondary education. (In Canada, nearly 65 per cent of recent immigrants have achieved that level of education.)
- ▶ The mean scores in literacy among immigrants in Canada and the US are significantly lower than their native-born counterparts. But recent immigrants tend to perform slightly better than established immigrants.
- ▶ It appears that in some countries there is an education-skills 'gap': while the proportion of immigrants who complete higher than upper-secondary education is relatively high, there are much fewer who score at Levels 3 and 4/5 (about 40 per cent of recent immigrants in Canada scored those levels).

## 10. Skills, Parental Education and Literacy Practice in Daily Life

*ALL* explores the extent to which observed differences in skills can be attributed to socio-economic inequalities, gauged largely by the education levels of the respondents' parents, considering three cohorts of adults: youth aged 16 to 25; early-career adults, 26 to 45; and middle-career adults, 46 to 65. *ALL*'s analysis further shows interesting variation in the impact of engaging in literacy practices at home and at work on inequality in skill.

### Key findings:

- ▶ Comparison of socio-economic inequalities in skills among youth suggests that Norway is the most successful at reducing the skills disadvantages typically associated with low levels of parental education; in contrast, the US exhibits the largest gap in skill levels by socio-economic background.
- ▶ The level of engagement in literacy activities at home and at work has a significant impact on literacy scores. The magnitude of the association is similar across all age groups, with the strongest association being among younger age groups. The positive effect of literacy engagement at work grows stronger as the worker grows older.
- ▶ The literacy skills of the youth aged 16 to 25 in 2003 who have low-educated parents are lower than the literacy skills of the same group in 1994.

## 11. Skills and Health

*ALL* examines the relationship between skills and various aspects of individual health. Two latent class analyses were performed to identify groups of people sharing response tendencies to a set of 13 health-related background questions. The first identified four classes of individuals based on questions related to general health status (excellent general health, good, fair, and poor); the second identified four classes pertaining to health status at work (no work-related limitations, physically limited at work, emotionally limited, physically and emotionally limited). These analyses were then used to explore the relationship of work-related and general health status to the literacy and numeracy skills measured.

### Key finding:

- ▶ Literacy and numeracy scores pertain to various health classifications

formed a pattern quite similar in all countries: those classified as being among the most healthy have the higher average literacy and numeracy scores while those classified as the least healthy have the lowest average proficiencies.

## 12. Conclusions and Directions for Further Work

-- Scott Murray  
*International Study Director, ALL*

Large numbers of adults display weakness in one or more skill domains, but the patterns of strength and weakness are complex and vary by country. Thus, human resource policies are a matter of serious policy concern in all countries, but each country would need to undertake a thorough analysis of its own needs.

The *ALL* data confirm that some countries have managed to improve the skills of adults with the weakest skills. Effort needs to be invested to understand how this was accomplished.

General health and health status at work appear to be strongly related to literacy.

The results also show that levels of participation in adult education and training have risen but participation is very strongly conditioned by literacy skill, with low-skilled individuals participating at much lower rates. Some countries have managed to reduce the level of inequality (that is, the difference between low skill and high skill) in both skill and adult education and training. It would be useful to understand how they managed to do so.

The analysis also identifies a strong link between wages, literacy and the use of ICTs. These data imply that ICTs are associated with productivity growth and Canada's competitiveness on world markets, but many adults may need to improve their literacy and numeracy skills to take advantage of these technologies.

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Info@abc-canada.org  
Web: www.abc-canada.org