

Literacy in Northern Alberta

Data Summary

Prepared for the Northern Labour Market
Information Clearinghouse

April, 1997



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Introduction

The question arose at a Clearinghouse Advisory Committee meeting some time ago: "with all of the emphasis that we have all put on literacy training over the last couple of decades, is literacy still an issue? Do we still have to devote so many resources to this area of education?" Since then new information has come out which allows us to take a fairly current look at the levels of literacy in northern Alberta. While different definitions and measures of literacy make comparisons over the decades difficult, we can get a reasonable picture of the changes over a recent five-year period. As the report on the most recent literacy survey says, "... the fundamental story remains the same: significant numbers of adult Canadians have low literacy skills that constrain their economic and social participation" (Reading the Future, 1996).

Methodology

The information in this report is derived from two literacy surveys and two sets of estimates based on those surveys. The Literacy Skills Used in Daily Activities (LSUDA) study was conducted in 1989 across Canada by Statistics Canada. In 1994, Statistics Canada worked with agencies in several countries to conduct the International Adult Literacy Survey (IALS) in Canada, the United States, Germany, Sweden, Poland, Switzerland (French- and German-speaking) and the Netherlands in 1994. These studies, while not identical, do include comparable information. This report does not depend directly on the studies themselves, as they do not provide information broken down to a sub-provincial level. Rather, it quotes two sets of estimates prepared by Statistics Canada based on data from LSUDA and IALS. As well, a number of reports on the two surveys and on literacy in general were consulted.

The definition of literacy has evolved over the past decade. At one time, anyone with less than a grade nine education was considered to be functionally illiterate and anyone with less than grade five was deemed "more or less completely illiterate". (UNESCO Criteria cited in *Adult Literacy in Northern Alberta: A Statistical Overview*, March 1989 [ALNA]). The LSUDA study defined literacy as, "the information processing skills necessary to use the printed material encountered at work, at home and in the community". The IALS worked with a slightly changed definition: "the ability to understand and employ printed information in daily activities, at home, at work and in the community - to achieve one's goals, and to develop one's knowledge and potential". These studies do not simply define individuals as literate or illiterate; both recognize that each person has some level of literacy skill.

The Surveys

LSUDA

Statistics Canada conducted the LSUDA survey in October, 1989, by way of personal interviews in respondents' homes. Those surveyed completed a series of tasks of different difficulties in order to determine their literacy and numeracy levels. The sample surveyed did not include persons in the Armed Forces, those in institutions or those on Indian Reserves. The results provided a national picture of literacy levels for Canadians aged 16 - 69. This survey established literacy according to the tasks which respondents were able to complete (see Appendix A for a description of the levels). It also examined numeracy levels though these are not considered in this report due to the lack of comparable data.

IALS

Statistics Canada conducted the Canadian portion of the IALS in 1994 in order to provide an updated picture of literacy skills in Canada, as well as to compare literacy in Canada to that in a sample of our trading partners and to examine the relationship between literacy and educational attainment, employment, and labour force participation, among other goals. The population sample used for this survey was similar to that for the LSUDA study, except that the later study sampled adults over 16, without an upper age limit. Also, the Yukon and Northwest Territories were not included in the survey.

The two surveys used different, though comparable, scales to measure literacy. Table 1, below, shows how the two sets of survey results correspond. LSUDA level 4 and IALS level 3 are considered the lowest desirable levels, or those at which a person is able to "understand and employ printed information in daily activities" effectively. The IALS also measures literacy skills on three scales; prose (the ability to use information from articles, stories and poetry), document (the ability to use information from forms, schedules and maps) and quantitative (the ability to use mathematical skills such as balancing a chequebook or calculating a tip).

While both surveys do report on numerical skills, estimates based on the 1989 data do not. In addition, the scale used in the numerical skills section of the LSUDA study does lend itself to comparison with the IALS data. As a result, this report does not cover numerical skill levels.

Table 1: Comparable Literacy Levels

LSUDA Levels	IALS Levels
1,2	1
3	2
4	3, 4/5*

*Statistics Canada researchers determined that the number of people at level 5 was too small to be analysed separately and so levels 4 and 5 are considered together.

Statistics Canada Estimates.

The first set of Statistics Canada estimates (Estimate 1) was based on the 1989 survey. Researchers examined how the rates of literacy skills related to factors such as age, education, income, geographical region, and gender and used those relationships to estimate literacy skill levels for the entire population aged 15 to 64 (taken from the 1986 census with growth estimates for 1991), including those left out of the actual survey. The geographical breakdown used for this report includes Census Divisions 10, 12, 16, 17, 18 and 19, which include the Clearinghouse region and a few communities slightly to the south.

The more recent estimates (Estimate 2) are based on 1994 survey data, with the same set of variables used to predict literacy levels, this time for the C91 population, aged 16 and over. This information has been broken down to Federal Electoral Districts that best approximate the Clearinghouse region (the ridings of Peace River, Athabasca and Beaver River). The figures from both sets of estimates do have fairly large margins of error, which means that, while they may indicate trends, they should be used with caution.

Literacy and the Labour Market

Alberta Advanced Education and Career Development has recently produced a summary of the IALS in which the authors outline the importance of strong literacy skills in today's job market. The "strong relationship (that) exists between literacy and labour market outcomes" is evident in employment and income levels.

- The unemployment rate for those with level 1 prose literacy skills is 26%. For those at level 4/5 that rate is only 4%.
- Among those who were employed at the time of the IALS survey, those at the high end of the literacy scale also worked more weeks in the year prior to the study, averaging 45 weeks worked as opposed to 39.5 weeks for those with lowest level prose literacy skills.
- Looking at income levels; 60% of those with level 1 literacy skills earn \$18,000 or less, while only a handful earn \$40,000 or more. By contrast, of those tested at level 4/5 in prose literacy skills 33% earned \$18,000 or less while 29% earned \$40,000 or more.

High unemployment rates may be a contributor to, as well as a result of, low literacy skills. According to the AECD summary:

Since the majority of adults read mostly at work, those who are unemployed (or underemployed, in some cases) are less likely to read than are those who are at work or in school. This lack of reading practise contributes to the low skills of the unemployed. (Literacy and the Labour Market in Canada, 1997.)

Many Clearinghouse reports have shown that success in the job market in the future will require increasingly high literacy and technical skill levels. This trend is true across Canada and worldwide, according to AECD.

International Comparisons

On the whole, Canada fares reasonably in comparison to the other countries involved in the IALS. We rank generally higher than Poland, Switzerland and the United States; but we trail Sweden, Germany and the Netherlands. Both Canada and the U.S. tend to have more people at the high and low ends of the spectrum, while most other countries have higher numbers at levels 2 and 3.

Sweden is consistent in its high levels of literacy on all three scales. For example, in prose literacy, only 8% of Swedes have level 1 skills, compared to 17% of Canadians. At the other end, 32% of Swedes tested at level 4/5, compared to 23% of Canadians. The example set by Sweden shows Canadians just how much can be done and should be done in the field of literacy.

In our increasingly global economy, we must also be concerned about figures that show Canada's workforce to have lower level reading skills than those elsewhere. According to the IALS, Canada has three times as many skilled craft workers with only level 1 prose and document literacy skills than Germany, the Netherlands and Sweden. As well, Canadian machine operators/assemblers are twice as likely to have level 1 document and quantitative skills than are their German and Dutch counterparts. (*Literacy and the Labour Market in Canada*, 1997).

Alberta Results


Alberta performed better than the country as a whole in both literacy surveys and in the resulting estimates.

Table 2: LSUDA Results

Literacy Level	Alberta (% of population)	Canada (% of population)
1	5	7
2	7	9
3	17	22
4	71	62

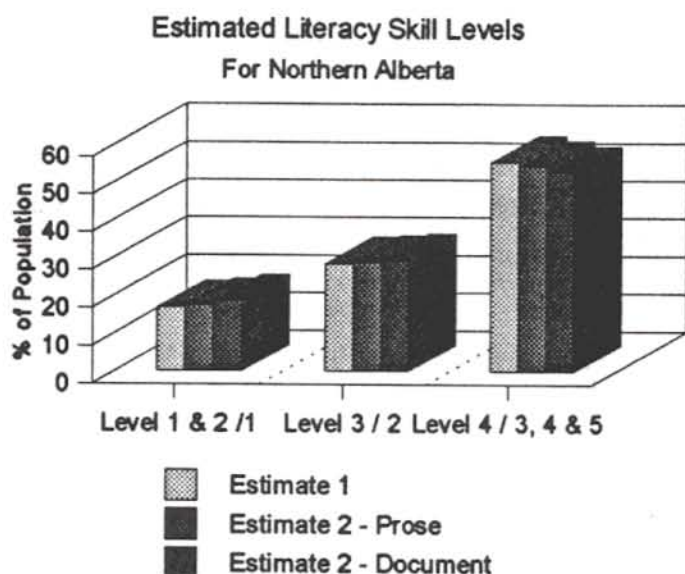
Table 3: IALS Results (% of Population)

Literacy Level	Prose - Alberta	Prose - Canada	Document - AB	Document - CA
1	15	22	16	23
2	21	26	21	24
3	36	33	33	30
4/5	29	20	30	22

 =Desirable literacy skills levels

Note - the apparent drop in the percentage of Albertans with desirable literacy skills is consistent with results of IALS generally. In *Reading the Future: A Portrait of Literacy in Canada*, this difference is attributed, at least in part, to improved measurement techniques.

Northern Alberta Estimates



Estimate 1 placed 16.6% of the population at the lowest literacy skill levels; Estimate 2 raised that to 17.3% for prose literacy and 18.3% for document. The middle ranges also appear to have risen slightly, from 28.2% based on the 1989 survey, to 28.7% and 29.2% based on 1994 data. The numbers at the higher literacy skill levels seem to have fallen off, from 55.2% in Estimate 1 to 54% for prose and 52.5% for document literacy in Estimate 2.

As with the difference in survey results for Alberta as a whole, the apparent slight drop in estimated literacy skill levels is probably due to the slightly

different populations considered in the two estimates, and to the improved survey devices on which Estimate 2 was based.

One other point worth noting is the difference between the literacy estimates for major centres and those for the region as a whole. A set of Estimate 1 (1991) figures for Grande Prairie, Fairview, Peace River, Fort McMurray, Slave Lake and Lloydminster show a combined total of 59% of the population with level 4 literacy skills, up from 55.2% for all of northern Alberta. This

suggests that the strongest need for literacy training is outside of the major population centres.

Literacy Programs and Learners

In 1990, almost 13,000 Albertans were enrolled in 318 literacy training programs according to AECD. At that time over 8,500 people were waiting to get into programs. The majority of institutional learners were female, single and between 20 and 30 years of age. About one-half had been out of the regular school system for 11 years or more. Over half live in centres with populations over 10,000. Figures have not been assembled in the same manner since then, but such information as is available suggests that the numbers have not changed significantly. The 1995 "Alberta Literacy Profile" prepared by AECD also shows that about two-thirds of the literacy learners were enrolled in institutional programs and one-third in tutorial programs.

More than one individual in the community education field pointed out that those with low literacy skill levels have often not succeeded in the traditional education system. Such learners would likely benefit from innovative approaches to education in general and literacy training in particular.

Conclusion

The literacy skills estimates from Statistics Canada and such information as is available regarding literacy training programs suggests that there has been relatively little change in the need for literacy training in northern Alberta. This fact in itself suggests that there may be a need for a new approach to literacy training. New methods of teaching and of learning, along with new ways of reaching potential learners should be considered.

Alberta Advanced Education's document, Literacy and the Labour Market in Canada makes one more important point regarding the importance of literacy training to institutions such as the Clearinghouse partners. Employees with high levels of literacy skills are more likely to participate in upgrading training than are their less literate co-workers. As a result, as northern institutions increase their investment in contract training for industry, they increase their stake in the literacy of the northern workforce.

Sources

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___ Estimated Population 15-64 by Reading Skill Level, 1991.

___ "Canadian Results of International Adult Literacy Survey Released", Press Release, September, 1996.

___ Estimates of Literacy Skills for Small Area Populations, April, 1997.

Statistics Canada, Human Resources Development Canada, National Literacy Secretariat, Reading the Future: A Portrait of Literacy in Canada, 1996.

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APPENDIX A

DESCRIPTION OF THE READING AND NUMERACY LEVELS

-LSUDA

READING LEVELS (1-4)

- Level 1: Canadians at this level have difficulty dealing with printed materials. They most likely identify themselves as people who cannot read.
- Level 2: Canadians at this level can use printed materials only for limited purposes such as finding a familiar word in a simple text. They would likely recognize themselves as having difficulties with common reading materials.
- Level 3: Canadians at this level can use reading materials in a variety of situations provided the material is simple, clearly laid out and the tasks involved are not too complex. While these people generally do not see themselves as having major reading difficulties, they tend to avoid situations requiring reading.
- Level 4: Canadians at this level meet most everyday reading demands. This is a large and diverse group which exhibits a wide range of reading skills.

NUMERACY LEVELS (1-3)

- Level 1: Canadians at this level have very limited numeracy abilities which enable them to, at most, locate and recognize numbers in isolation or in a short text.
- Level 2: Canadians at this level can deal with material requiring them to perform a simple numerical operation such as an addition or subtraction.
- Level 3: Canadians at this level can deal with material requiring them to perform simple sequences of numerical operations which enable them to meet everyday demands.

3. SAMPLE TASKS FOR THE LITERACY SCALES

Level	Prose	Document	Quantitative
1	Use the instructions on the bottle to identify the maximum duration recommended for taking aspirin.	Identify the percentage of Greek teachers who are women by looking at a simple pictorial graph.	Fill in the figure on the last line of an older form, "Total with Handling," by adding the ticket price of \$50 to a handling charge of \$2.
2	Identify a short piece of information about the characteristics of a garden plant, from a written article	Identify the year in which the fewest Dutch people were injured by fireworks, when presented with two simple graphs.	Work out how many degrees warmer today's forecast high temperature is in Bangkok than in Seoul, using a table accompanying a weather chart.
3	State which of a set of four movie reviews was the least favourable.	Identify the time of the last bus on a Saturday night, using a bus schedule.	Work out how much more energy Canada produces than it consumes, by comparing figures on two bar charts.
4	Answer a brief question on how to conduct a job interview, requiring the reader to read a pamphlet on recruitment interviews and integrate two pieces of information into a single statement.	Summarize how the percentages of oil used for different purposes changed over a specific period, by comparing two pie charts.	Calculate how much money you will have if you invest \$100 at a rate of 6% for 10 years, using a compound interest table.
5	Use an announcement from a personnel department to answer a question that uses different phrasing from that used in the text.	Identify the average advertised price for the best-rated basic clock radio in a consumer survey, requiring the assimilation of several pieces of information.	Use information on a table of nutritional analysis to calculate the percentage of calories in a Big Mac® that comes from total fat.

Source: Reading the Future, Statistics Canada, 1996, Figure 1.2 (p. 16).