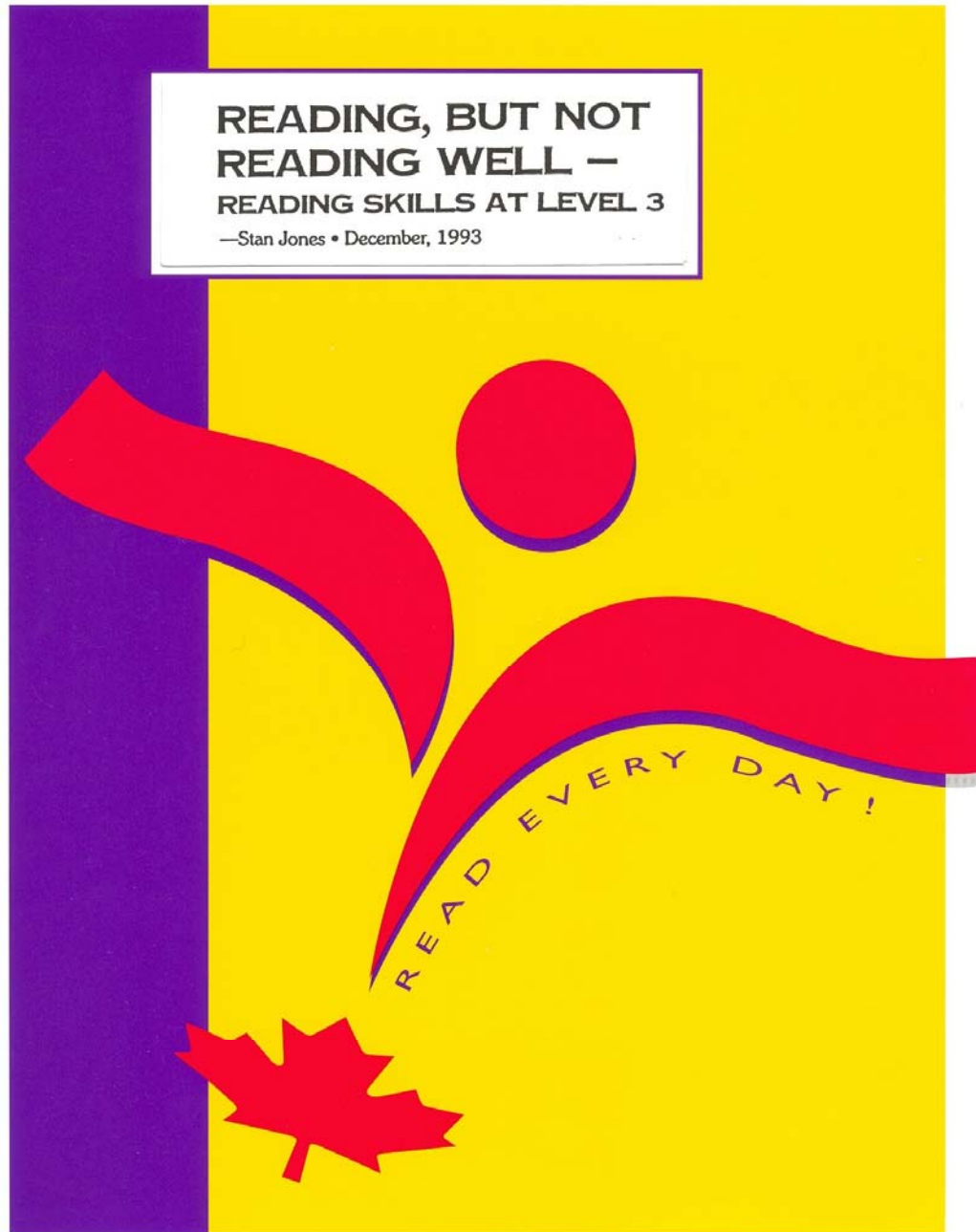




Human Resources Development Canada / Développement des ressources humaines Canada

READING, BUT NOT READING WELL – READING SKILLS AT LEVEL 3

—Stan Jones • December, 1993



National
Literacy
Secretariat



Le Secrétariat
national à
l'alphabétisation

Canada

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READING WELL -
READING SKILLS AT LEVEL 3**

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A REPORT FROM THE *SURVEY OF LITERACY
SKILLS USED IN DAILY ACTIVITIES*

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INTRODUCTION

Public discussion of adult literacy has often been unproductive because it has recognized only two categories: literate and illiterate. This restriction, to take just one example, has made it difficult to understand how Canada can have a literacy problem when it regularly reports (as do all industrialized countries) a literacy rate of 99%. One of the objectives of the *Survey of Literacy Skills Used in Daily Activities*¹ (Montigny, Kelly, & Jones, 1991) was to provide a richer framework for adult literacy policy. As a result of that project, a new category of adult reader - Level 3 - was defined:

Canadians at this level can use reading materials in a variety of situations, provided the material is simple and clearly laid out, and the tasks involved are not too complicated. While these people generally do not see themselves as having significant reading difficulties, they tend to avoid situations requiring reading.

Because this is a new concept in adult literacy and because the survey estimated that a significant number of adults - some 22% of the adult Canadian population - are at this level, it is important that this category be well understood. The purpose of this report is to set out in detail what we learned about adults with Level 3 literacy skills and what implications that data has for adult literacy policy.

This report begins with a brief discussion of how reading skills were measured in the *Survey of Literacy Skills Used in Daily Activities* and then considers at some length the reading performance of the Level 3 group. Finally, it examines some of the social characteristics of this category.

1 - This survey was conducted by Statistics Canada for the National Literacy Secretariat. Some funding was also provided by Employment and Immigration Canada.

MEASURING ADULT LITERACY SKILLS

It is generally agreed that functional literacy skills as a whole can be represented as a continuum of skills: "It seems more appropriate to represent functional literacy as continuously distributed, with various points along the continuum indicating different levels of functioning" (Kirsch & Guthrie, 1981).

Even though this continuum is fundamental, it is important, for program and policy needs, to mark certain points or levels along the continuum as worthy of particular attention. The categories of reading ability levels used in the design of the survey (and in this report) represent significant differences in literacy abilities.

EVERYDAY READING

Most everyday reading tasks - the kind we measured in the survey - require the reader to use a text to find information that will then be used as part of some larger task. For example, a parent will read a notice sent home by a school to find out what special preparations must be made, if any, for a field trip; a clerk will read a job availability posting to decide whether or not to apply for it; a member of a church will read the weekly bulletin to find activities to take part in. These reading purposes are different from those that characterize most school reading. Indeed, one of the most significant advances in understanding adult literacy

was the identification of the difference between reading-to-do and reading-to-learn (Sticht, 1975; Mikulecky, 1985; Guthrie & Kirsch, 1987).

The most comprehensive theory of adult reading (Kirsch and Mosenthal, 1990) posits that the difficulty of any literacy task depends both on the difficulty of locating relevant information in a text and on the difficulty of using that information as part of the larger task. Thus a task that requires a reader to determine whether or not milk is on sale by looking through an ad from a grocery store is simpler than one that asks the reader to use that same ad to determine what the least expensive meat is; the latter requires both more information (several prices for meat must be found) and a conclusion based on the comparison of prices. In designing the test for the survey, we used this theory to predict the relative difficulty of most reading tasks.

THE SURVEY TEST

Using work that had been done both in Canada (Jones & Librande, 1987; Jones & Déry, 1987) and the United States (Kirsch & Jungeblut, 1986), we identified and defined the four levels used in the survey (see **Table 1**). Given these definitions, we categorized the test items by level. Thus, the task that asked the respondents to

determine whether milk was on sale would be Level 2 as it only required the location of a single word in the text; the meat price comparison task would be Level 3 as it required more than simple location of words in a text.

Data from the test itself were used to determine whether our assignment of task to level was correct. If the meat price comparison task, for example, had been easier than the milk-on-sale task, then our categorization would have been wrong.

Finally, individuals were assigned to a level according to whether they were able to accomplish most of the tasks at that level. For example, a reader who could perform the milk-on-sale task (and other Level 2 tasks) but not the meat price comparison task (and other Level 3 tasks) would be identified as Level 2; a reader able to do Level 2 and the Level 3 tasks would be identified as Level 3.²

The test consisted of 35 tasks based on material taken from home and work contexts familiar to most adults in Canada. The tasks were designed to simulate normal use of reading material (such as set out above). Equivalent tests were created in English and French so that speakers of both Canada's official languages would be assessed equally (Gessaroli, 1992).

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

Table 1 - Definitions of levels of reading skill³

2 - Some people who performed most of the Level 3 tasks correctly missed one or two Level 2 tasks and some identified as Level 2 were able to perform a handful of Level 3 tasks. Our criterion for identifying respondents as Level 3 was that they had a probability of 80% of performing Level 3 items correctly.

3 - Source of data for the tables and graphs in this report: *Survey of Literacy Skill used in Daily Activities*, Statistics Canada. 1989

	Population (thousands)	Reading Skill Level			
		Level 1	Level 2	Level 3	Level 4
Canada	18,024	7%	9%	22%	62%
Atlantic	1,546	6%	13%	30%	52%
Newfoundland	384	7%	17%	36%	39%
PEI	85	- ¹	- ¹	- ¹	- ¹
Nova Scotia	594	5% ²	10%	28%	57%
New Brunswick	483	6%	12%	26%	56%
Quebec	4,721	6%	13%	25%	57%
Ontario	6,689	9%	8%	21%	62%
Prairies	2,984	4%	7%	19%	70%
Manitoba	703	5% ²	7% ²	23%	65%
Saskatchewan	632	3% ²	5% ²	19%	72%
Alberta	1,649	4%	7% ²	17%	71%
British Columbia	2,084	5%	7%	19%	69%

1 – The sampling variability of this estimate is too high for the estimate to be released.
2 – Note that the sampling variability of this estimate is high.

THE SURVEY OF LITERACY SKILLS

The survey was conducted with respondents selected from those who had participated in Statistics Canada's monthly Labour Force Survey (LFS) in the previous six months.

Although using LFS households (48,000 households per month) provided additional information that would not have been possible to obtain otherwise, it did mean that groups not covered by the LFS - aboriginal Canadians living on reserves, residents in institutions (such as prisons), residents of Yukon and Northwest Territories, and members of the armed services - were not included in the literacy survey. These exclusions represent about 3% of the population. Young adults and adults with lower educational attainment were over-sampled so that a more detailed picture of these groups could be presented. In

all, 9,445 respondents completed the test. A complete report on the conduct of the survey along with the basic data can be found in Montigny, Kelly and Jones (1991). For the purposes of this report, we present only the overall data for Canada and the provinces (see **Table 2**).

Table 2 - Percentage distribution of persons age 16-69 by reading skill level

THE READING SKILLS OF LEVEL 3 READERS

The skills at Level 3 are possibly the most difficult of all the four levels to characterize. Literacy workers have had considerable experience with individuals at Levels 1 and 2 and hence have a rich set of descriptions for them. Level 4 is, in the terms of our survey, easy to identify as those who had little difficulty with all but the most difficult items. In this section, we have attempted to characterize the specific skills of people whose test results placed them at Level 3.

Even though there were literacy tasks on the test that were difficult for those at Level 3, the tasks that respondents at this level did accomplish are not trivial ones. One of the easiest Level 3 items required the reader to find out using a letter from a school when the form attached to the letter was to be returned. The letter contained many dates: the date it was written, the date the teacher was suggesting for an appointment, and the information about returning the letter ("within two days"). There were few signals in the text to guide the reader to the answer.

A more difficult item at this level asked the reader to use a chart specifying which sandpapers to use for specific tasks to find out what kind to use to sand wood after applying a sealer coat - a literacy task similar to many workplace reading tasks. To do this the reader has to combine information from several parts of the text - the grade of sandpaper on one axis (the columns) of the chart, the job on the other axis (the rows) - and then

understand the information at the intersection of the appropriate row and column.

The most difficult among the Level 3 tasks asked the reader to find the proper amount of an over-the-counter medicine for a seven-year old child by using the label from the medicine bottle. On the surface, this seems a simple task, but it is instead rather complex as the reader must

- find where the dosage instructions are in the text (there is also information on contents, storage, precautions on use, etc.)
- find the information for the correct age, understanding that the range "6-8" includes "7"
- match the age with the dosage, realizing that, in this case, the dosage follows the age, though there is no explicit indication of this
- understand the dosage instructions, "4 tablets."

Tasks that only required finding simple information in a text were easy for Level 3 respondents. Only a few had any difficulty finding five items in a grocery ad. Tasks involving complex texts (such as maps) or requiring complicated searches for information (e.g., keeping two pieces of information about job

benefits in mind while using them to search for a third) were most difficult for this group.

Tasks that required some inferencing proved difficult for Level 3 readers (and, of course, were even more difficult for those at Levels 1 and 2): the inference that "7" was included in "6-8," required by the medicine-label task, was the most difficult of those within Level 3.

One task asked the reader to read a school services pamphlet to find out what the school hours were where the paragraph labelled "School Hours" did not explicitly

Figure 1 • Percent of respondents at each reading skill level answering reading items correctly

Items are ordered from easiest (left) to most difficult (right). No writing or numeracy items are included.

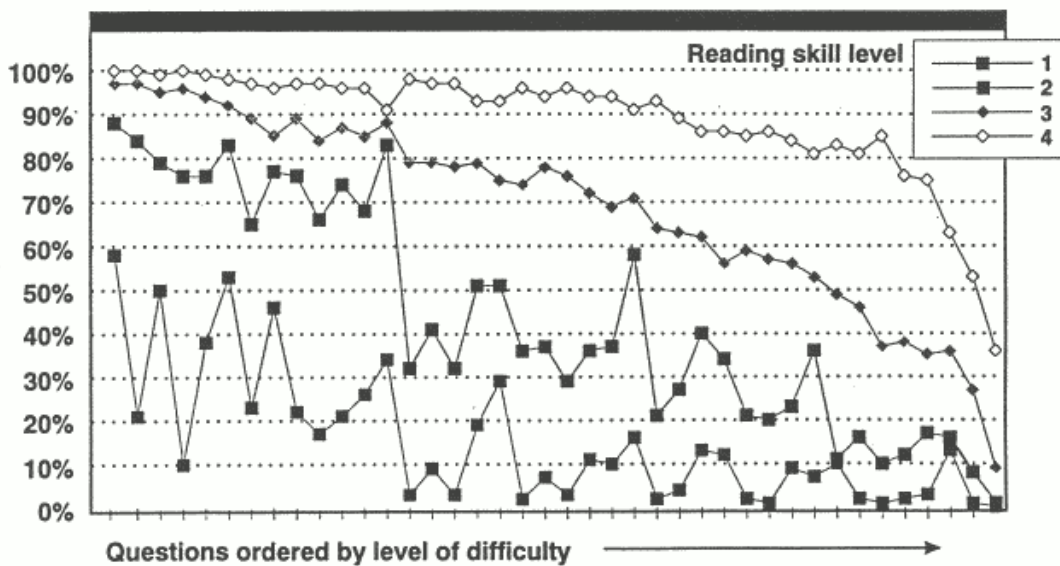
give the hours, but simply said to "check with local schools." Such tasks - requiring more inferences or less obvious inferences - are too difficult for Level 3.

Although the levels are points along a continuum, we did not attempt to place them proportionally along that continuum. Rather, they are placed at points that ideally represent marked changes in ability. Thus, it is useful to point out that Level 3, rather than being "halfway" between Levels 2 and 4, is more like Level 4 than like Level 2. This is illustrated in the graph in **Figure 1**.

This graph displays for each item - easy items at the left of the graph and difficult items at the right - the percent of respondents at each level who answered the item correctly. The pattern of

Level 3 is more like that of Level 4 than it is like that of Levels 1 and 2. (The profiles for both Levels 3 and 4 are relatively smooth, while those for Levels 1 and 2 are more jagged.) This suggests that whatever makes an item relatively more difficult for someone at Level 4, also makes it relatively more difficult for someone at Level 3.

Because Level 3 readers succeed at many reading tasks, they are unlikely to regard themselves as people who have significant reading difficulties and are certain to reject any identification with being "illiterate" -functional, marginal, or otherwise. It is quite possible that with experience and regular use of reading material Level 3 readers can perform quite complex tasks with texts that they usually encounter in their jobs or at home.



A PROFILE OF LEVEL 3 READERS

Since Level 3 differs qualitatively in reading skill from Levels 1, 2 and 4, there are likely to be social characteristics related to literacy that differ as well. This section presents a profile of background characteristics and literacy practices that might distinguish Level 3 readers from other respondents.

EDUCATION

Most people with Level 3 reading skills have attended secondary school, at least for some time; only 13% of the respondents at this level have lower educational attainment. (See **Figure 2**.) In contrast, the proportion of Level 2 respondents who did not attend secondary school is nearly three times as large (36%).

Only 25% of those at Level 3 went beyond secondary school; in this regard, they differ notably from the Level 4 respondents, 53% of whom did some post-secondary work (25% in a community college or trade school and 28% at university). Of those at Level 3 who did continue their education past secondary school, twice as many attended college (17% of all Level 3) as attended university (7%).

Those Level 3 respondents who had completed secondary

school were somewhat more likely to have taken a vocational or commercial program (35%) than were Level 4 respondents (25%).

In sum, Level 3 is characterized by attainment of at least secondary school education, while Level 4 is more likely to have some education beyond that and Level 2 to have less than secondary school education.

AGE

Level 3 readers are older than those at Level 4: 25% are over 55 vs. 10% of those at Level 4. (See **Figure 3**.) And, most interestingly, younger adults (under 25 years) are also more likely to be at Level 3 than are those between 25 and 35: 23% of those under 25 are at Level 3 while 17% of those aged 25-34 are at Level 3.

It may be that some proportion of respondents aged 16-24 years have had less experience with everyday literacy; functional literacy differs in many ways from school literacy (Mikulecky, 1982; Guthrie & Kirsch, 1987) and many of those 16-24 are still in school. In any case, the difference at Levels 1 and 2 for these two age groups is virtually non-existent (6% of 16-24, 7% of 25-34).

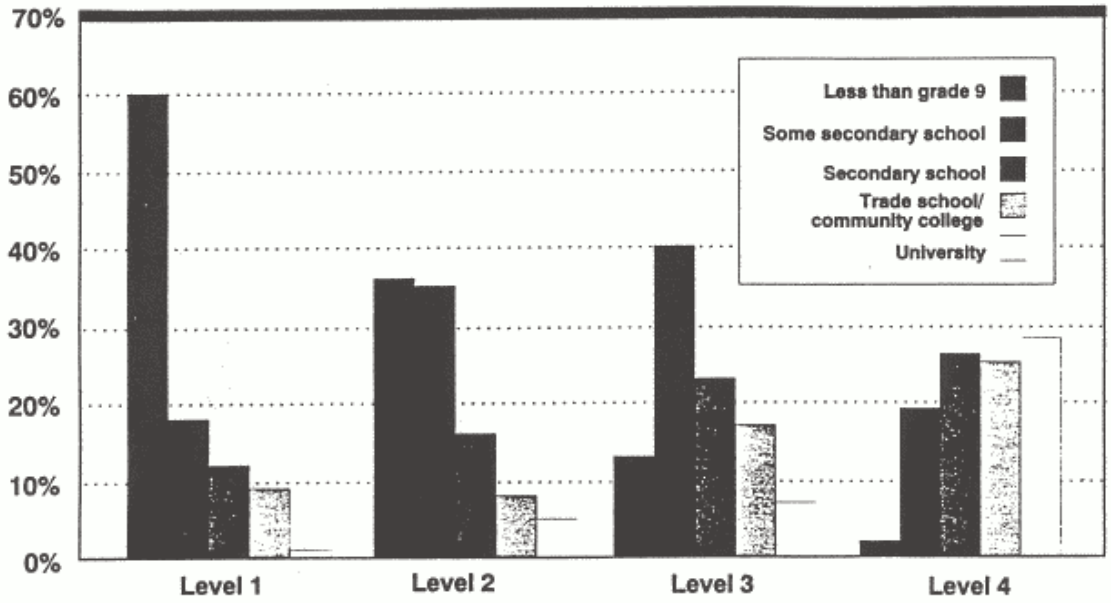
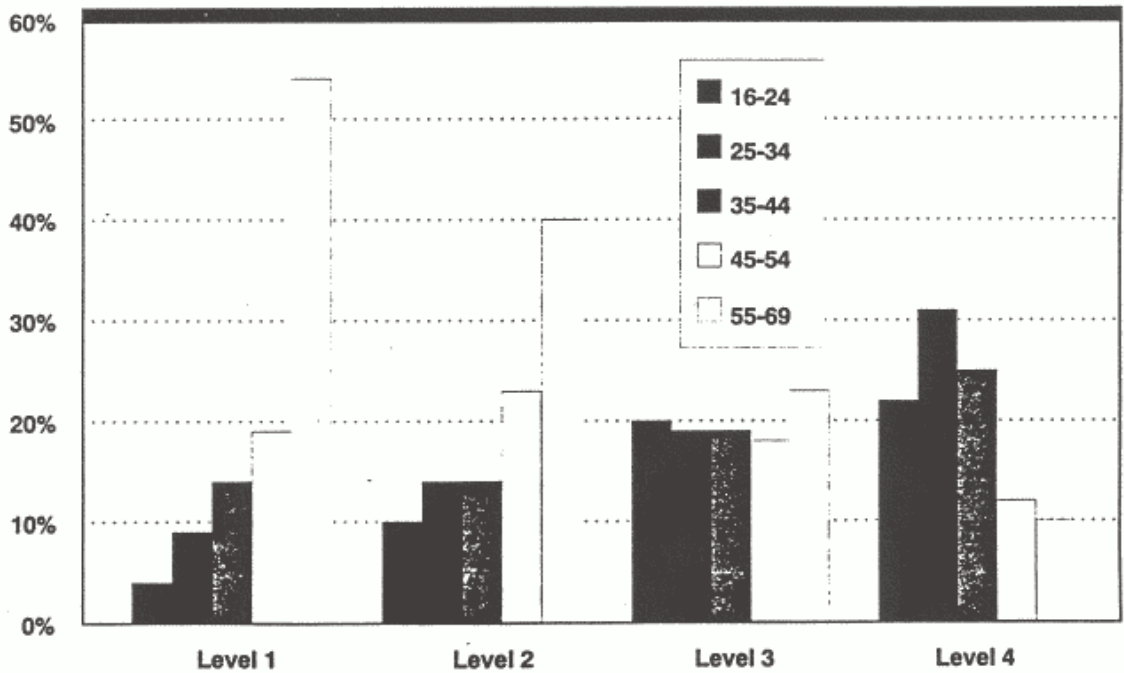
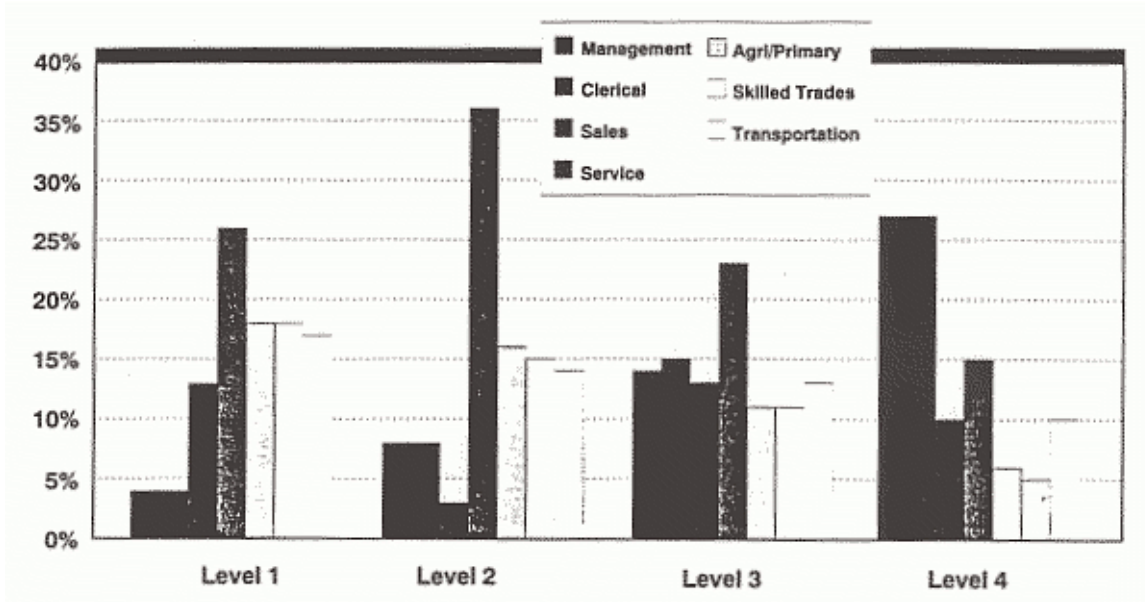


Figure 2 • Distribution of educational attainment within each reading skill level

Trade/college and university include both graduates at those levels and those who attended, but did not graduate.

Figure 3 • Age distribution within each reading skill level





OCCUPATION

As might be expected from educational attainment levels, Level 3 respondents are more likely to work at white collar occupations than are those at Level 2: 34% of those at Level 3 have this type of work - managerial, professional, and clerical occupations - while only 18% of those at Level 2 hold white collar jobs. (See **Figure 4**.) Similar proportions of Level 2 and Level 3 have blue collar work (24% - though this is only slightly larger than the blue collar proportion of Level 4, 17%).

Of particular interest is the nature of service occupations, since these are widely considered to be the growth occupations in the '90s. These occupations make up significant proportions of the three lowest levels,⁴ but they are not predominate in Level

3 as they are in Level 2. Service occupations represent a much smaller proportion of Level 4 than do management and clerical occupations.

Occupations alone do not cover all we want to know about work and literacy. The growth in service sector jobs includes growth in professional and management occupations within service sector organizations. **Figure 5** presents a picture of how some Canadian industries are clustered in the four reading skill levels.⁵ The service industries are not as well represented in Level 3 (40%) as in Levels 2 and 4 (43% and 52%, respectively). Trade sector jobs play a larger role in Level 3 than they do in Level 2 (20% vs. 15%) and manufacturing sector jobs are more important in Level 3 (21%) than they are in Level 4 (15%).

Figure 4 • Proportion of respondents at each reading skill level reporting occupations

The occupations have been grouped to minimize the effect of small sample size.

4 - This is in part because service occupations are by far the largest group, representing 21% of the respondents who were in the labour force. What we are concerned with is the relation of service occupations to other occupations within a reading skill level.

5 - Again, service industries dominate, reported by 47% of respondents who were in the labour force.

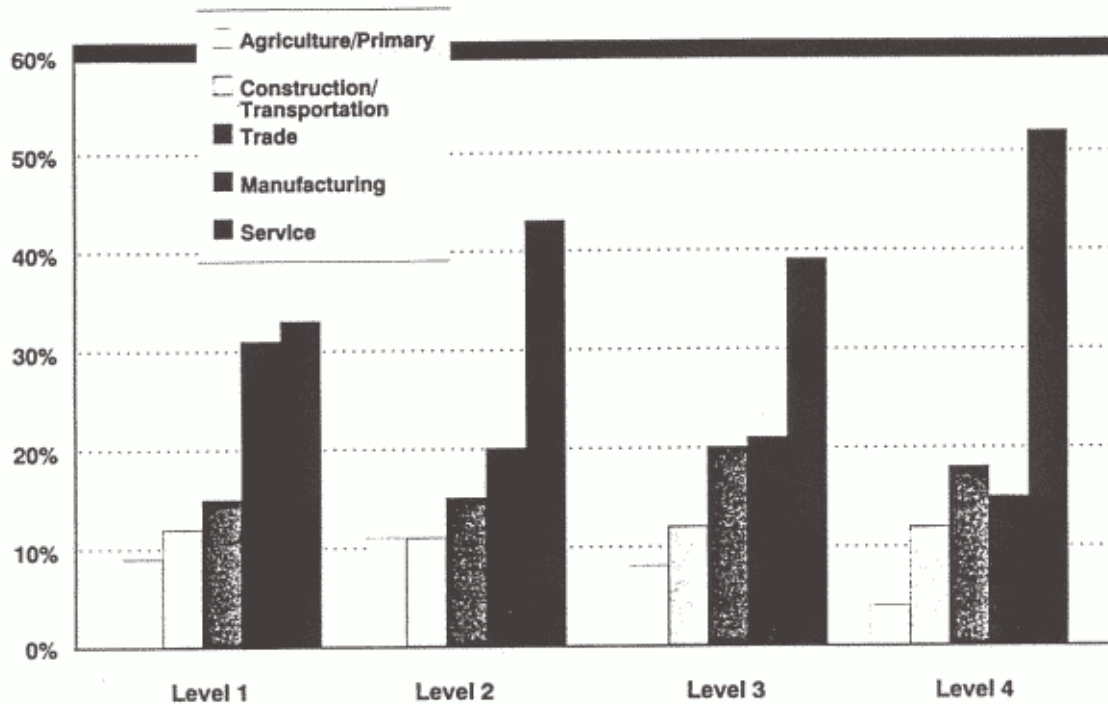


Figure 5 • Proportion of respondents at each reading skill level reporting employment in particular industries

The industries have been grouped to minimize the effect of small sample size.

LABOUR FORCE

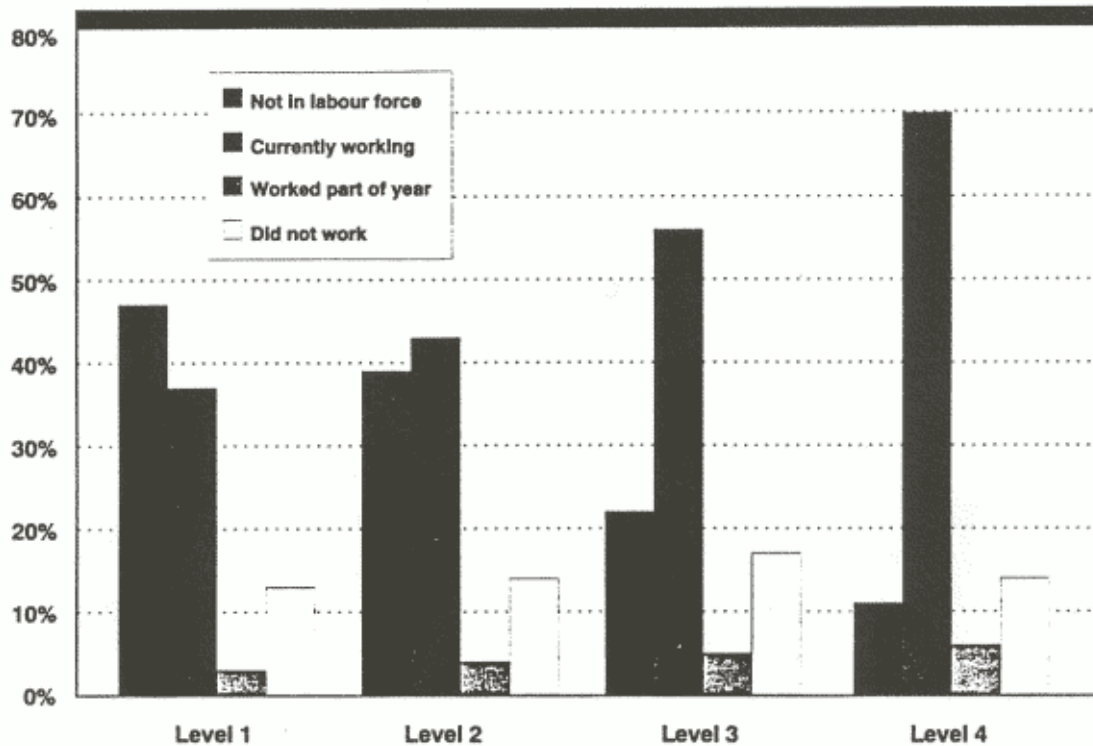
Level 3 and Level 4 respondents were more likely to be employed⁶ than were Level 2 respondents (56% and 70% vs. 43%). (See **Figure 6**.) Level 2 respondents were considerably more likely to be out of the labour force (39% had neither worked nor sought work in the last year) than were those at Levels 3 or 4 (22% and 11%). While it might be concluded that it is the reading skill level that determines whether one is employed, the real reasons may not be that simple. Working, after all, provides a context for regular reading - particularly for a variety of reading - that may not be encountered by those without work.

There were some notable regional differences in the relation of literacy level and employment; those at Level 3 were less likely to find employment in Newfoundland or New Brunswick (39% of those at Level 3 were not in the labour force in the last year) than in Ontario or Alberta (where only 29% had not had a job).

IMMIGRATION

Eighty-two percent of all respondents to the survey were born in Canada; 81% of the Level 3 respondents were Canadian born, a smaller proportion than for Level 4 (86%) but more than for Level 2 (74%). Although immigrants as a group have higher levels of education,

⁶ - Respondents were asked if they were working at the time of the survey. Those who were not were asked if they had worked in the last year. Those who had not were in turn asked whether they had sought work in the last year. Statistics Canada considers those who answer "no" to the last question to be out of the labour force.



language and lack of experience with everyday literacy demands in Canada would also affect the literacy levels of some immigrants; it is difficult to isolate the effects of each of these factors.

GENDER

Gender plays little role in literacy, at least for those born in Canada. For all respondents, 50% of those at Level 3 are male and 50% female. In this, Level 3 is like Levels 2 (49% male, 51% female) and 4 (50%-50%). For those born in Canada, the numbers are nearly equal for each gender at all literacy levels: 52% of the Levels 2

and 3 are male; 51% of Level 4 are female. For those born outside Canada, however, there is a marked gender effect: women dominate both levels 3 and 2 (58% and 61%, respectively), while men are the larger proportion of Level 4 (57%).

Figure 6 • Proportion of respondents at each reading skill level reporting different labour force participation

READING PRACTICES OF LEVEL 3 READERS

Because Level 3 respondents do not read as well as those at Level 4, we would expect their reading practices to differ, and they do. They also differ from those at Level 2. The survey asked about the kinds of reading that respondents who were employed had to do on the job (see **Table 3** and **Figure 7**). For every reading task, more of the Level 3 respondents reported positively than did those at Level 2, and fewer than those at Level 4. The pattern of tasks, however, differs little from level to level; that is, at all four levels, the most frequently reported reading tasks involve notices, labels, and forms, while the least frequently reported involve blueprints and charts.

Some observers of literacy development have argued that variety is as important as frequency in acquiring and maintaining literacy. In this regard, Level 3 practices lie between Level 2 and Level 4. **Table 4** displays the proportion of respondents at each level who reported performing different kinds of reading tasks on the job. Half of the Level 2 respondents said they performed only two or fewer kinds of reading tasks, but over 50% of those at Level 3 reported 4 or more (60% of Level 4 reported 5 or more). Almost a quarter of those at Level 2 said they did no reading at work, but only 12% of the Level 3 respondents identified no work-related reading tasks.

Table 3 • Reading tasks at work, by reading skill level

Type of Reading	Reading Skill Level		
	Level 2	Level 3	Level 4
Blueprints or charts	26%	37%	49%
Reports, articles, books	31%	49%	68%
Catalogues, lists	44%	58%	72%
Manuals, instructions	39%	64%	78%
Letters, memos, notes	53%	72%	86%
Notices, labels, forms	64%	77%	87%

Table 4 • Variety of reading tasks at work, by reading skill level

Number of kinds of reading tasks	Reading Skill Level		
	Level 2	Level 3	Level 4
none	24%	12%	5%
1	14%	8%	5%
2	12%	10%	5%
3	13%	13%	10%
4	15%	15%	14%
5	12%	19%	27%
6	10%	23%	35%

Type of Writing	Reading Skill Level		
	Level 2	Level 3	Level 4
Specifications, estimates	17%	24%	36%
Reports, articles, manuals	20%	34%	51%
Forms, invoices, charts	52%	67%	80%
Notes, memos, letters	47%	64%	80%

Table 5 • Writing tasks at work, by reading skill level

Number of kinds of writing tasks	Reading Skill Level		
	Level 2	Level 3	Level 4
none	35%	22%	9%
1	22%	17%	12%
2	24%	26%	24%
3	10%	19%	28%
4	10%	16%	26%

Table 6 • Variety of writing tasks at work, by reading skill level

Similar differences in writing at work, both by type and in variety, were reported. (See **Table 5**, **Table 6**, and **Figure 8**.)

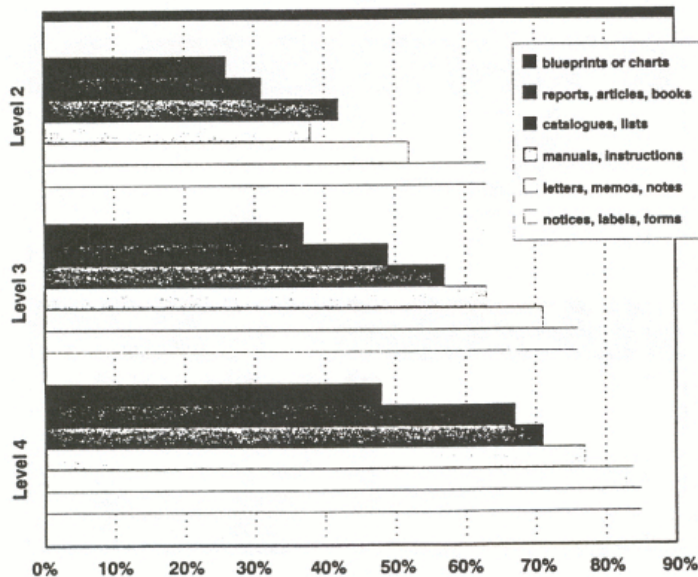


Figure 7 • Proportion of respondents who reported that their job required them to read specific kinds of texts

The question, “Does your job require you to read ... ?” was asked of those in the labour force; those not currently working were asked to refer to their most recent job.

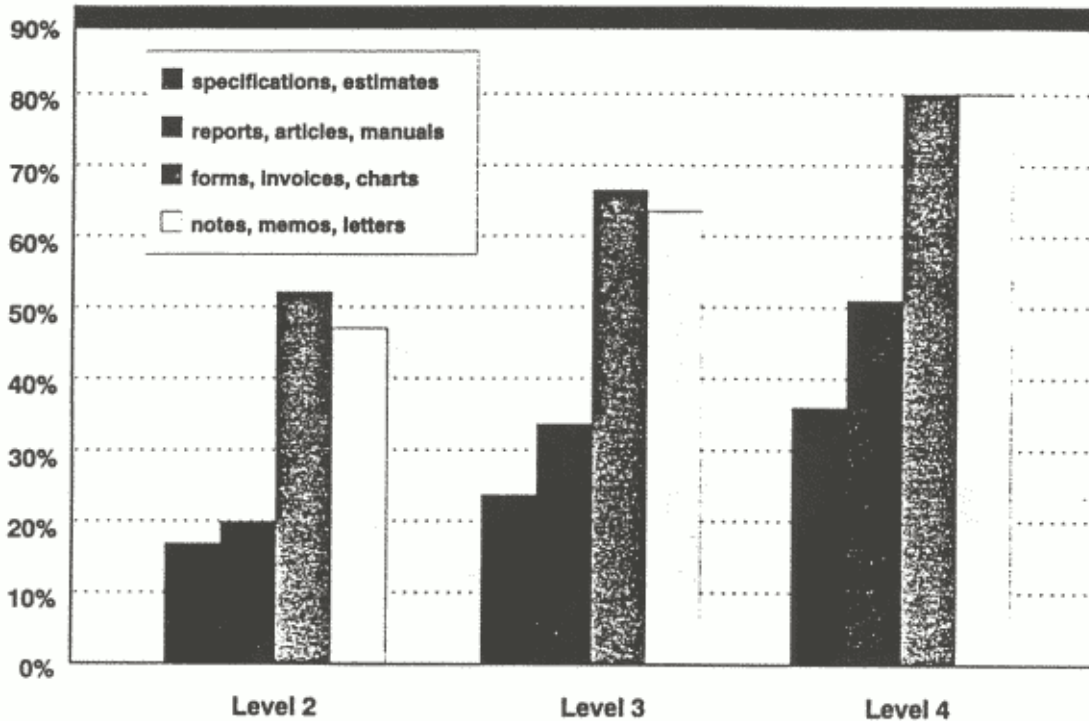


Figure 8 - Proportion of respondents who reported that their job required them to write specific kinds of texts

The question, "Does your job require you to write...?" was asked of those in the labour force; those not currently working were asked to refer to their most recent job.

SELF ASSESSMENT

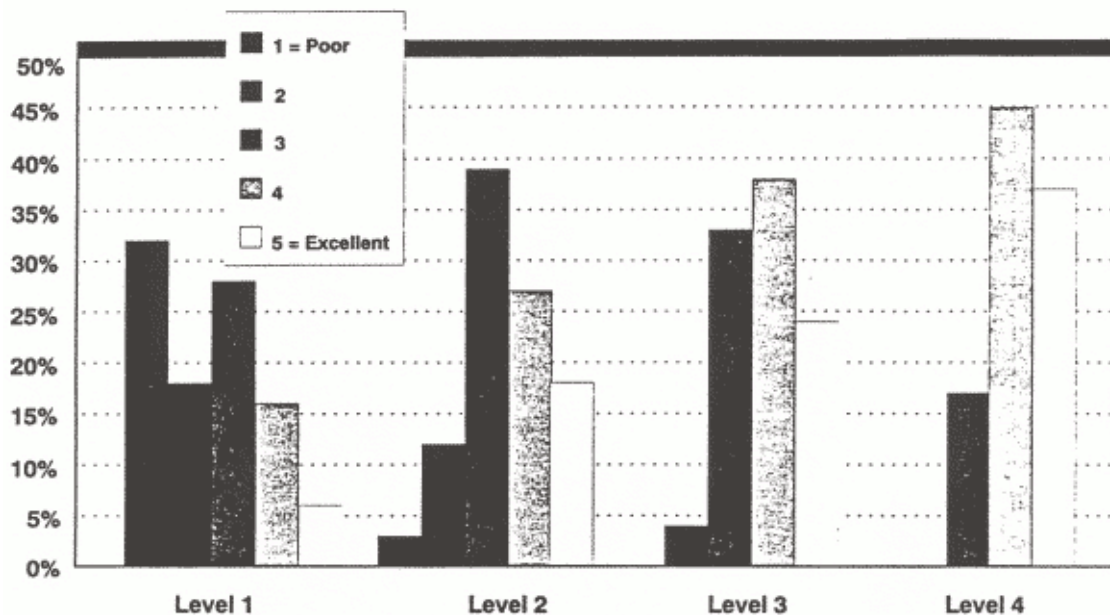
We collected information about the respondents' own assessments of their literacy in three different ways. We asked for

- a rating of their satisfaction with their skills
- examples of some kinds of reading where they might need help
- a simple self-rating of their skills.

In all these, the Level 3 respondents appeared to be more like Level 4 than like Level 2. For example, 91% of those at Level 3 said they were satisfied with their skills (96% at Level 4) while 82% at Level 2 were satisfied.

Level 3 respondents reported that they seldom needed help with literacy tasks, though 20% said they sometimes needed help with government documents or business information (11% of Level 4 reported needing help in these cases); 33% of those at Level 2 asked for such help. The greatest difference occurred in the reading of forms: only 8% of Level 3 had asked for help, but 24% of Level 2 had done so.

Level 3 respondents clearly felt their skills were less than ideal; **Figure 9** compares the self-ratings of reading skill given by respondents at each level. Only 24% chose 5 ("excellent") when asked to rate their skills on a five-



point scale; 57%. however, felt they were better than average. Only 5% said they were less than average in skill. Fifteen percent of Level 2 respondents rated themselves less than average and 27% felt they were better than average. At Level 4, 82% rated their skills as better than average or excellent; 37% of Level 4 rated themselves as excellent.

Interestingly, the survey showed that many adults are satisfied, to some extent, with reading skills they rate as only average. (Some Level 1 respondents reported satisfaction with skills they rated as lower than average.) Few at Level 3 considered their reading skills, whatever rating they gave them, to be problematic: 95% said they had no problems with daily reading outside work and 98% said their skills were adequate for

their job. Ten percent of Level 3 respondents, however, were concerned that their reading ability was keeping them from finding a job or improving the job they did have. (Over a quarter of those at Level 2 recognized the difficulty their skills presented for improving their job prospects.)

Figure 9 - Self-rating of respondents by reading skill level

Respondents were asked to rate themselves on a scale of 1 to 5, with 1 being "poor" and 5 being "excellent."

CONCLUSION

All of these findings suggest that Level 3 is indeed a distinct level of reading skill that is in some ways like Level 2, but more often like Level 4. Level 3 adults have learned to read and can do so in many situations. They are, however, less sure about their reading skills than are those at Level 4 and so use those skills less often; or perhaps the equation works the other way - it may be that because those at Level 3 use their reading ability less often, they are less sure about it. Reading is an ability that requires frequent and varied exercise; lower skills and fewer opportunities to read feed into each other to compound the problem.

It is difficult to assess how "at risk" Level 3 readers are. We believe that the evidence indicates that they are "narrow" readers, competent in the literacy tasks with which they are familiar and which they regularly carry out. To the extent that new work - whether in an existing job or in a new job - requires new reading tasks, Level 3 readers will have some difficulties. We know very little about how skills that have been developed in one context transfer to another (Oates, 1992), but there is little doubt that general proficiency is an important factor; new work will pose a larger transfer problem for Level 3 than for Level 4 readers. What we do not know from the survey is what kinds of reading demands of evolving job markets will confront Level 3 readers.

Although adult literacy practice has been concerned infrequently with the sort of reading difficulties that Level 3 readers present and there is, therefore, little body of practice to guide work with this group, some workplace literacy programs have begun to develop expertise in this area. It appears that Effective Reading in Context (discussed in *Basic Skills - Basic Business*. [Conference Board of Canada, 1992]) developed for Syncrude, is such a program. It is important to note that it was not identified as a literacy program, but as a program for effective reading.

It would also be useful to know how important the connection to Keyano College, which managed the program, was for the participants. A program that is part of a formal educational organization may be seen by Level 3 readers - most of whom have completed secondary school - as more appropriate than one developed by a community group. When asked who they would choose for an instructor, 55% of those at Level 3 indicated that a teacher from a school board or college would be their choice over a volunteer tutor or a friend.⁷

One of the challenges of literacy practice in the '90s will be to address all of these issues and to find ways to accommodate these learners, who are likely to be the majority of learners in the next decade.

7 - Because of the structure of the interview, only a small number of respondents were asked to indicate a preference; thus this result must be interpreted with caution.

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