

Chapter 10

Skills, Parental Education and Literacy Practice in Daily Life

Summary

This chapter examines the relationship between the skills measured in ALL and family socio-economic background as well as literacy related practices in daily life. The analysis explores the extent to which observed differences in skills can be attributed to socio-economic inequalities. This is done for three cohorts of adults, namely youth aged 16 to 25, early middle aged adults 26 to 45 and late middle aged adults 46 to 65. The three age groups differ in the relationship between skills and socio-economic background. For example, the strength of the link between family background and skills among youth has changed in some countries over time between the IALS and ALL survey periods. The analysis further shows interesting variation in the impact of engaging in literacy practices at home and at work on inequality in skill.

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Skills, Parental Education and Literacy Practice in Daily Life

10.1 Overview and highlights

This chapter examines the relationship between the skills measured in ALL and family socio-economic background as well as literacy related practices in daily life. The analysis explores the extent to which observed differences in skills can be attributed to socio-economic inequalities. This is done for three cohorts of adults, namely youth aged 16 to 25, early middle aged adults 26 to 45 and late middle aged adults 46 to 65. The three age groups differ in the relationship between skills and socio-economic background. For example, the strength of the link between family background and skills among youth has changed in some countries over time between the IALS and ALL survey periods. The analysis further shows interesting variation in the impact of engaging in literacy practices at home and at work on inequality in skill.

The main results of the analysis undertaken in this chapter are:

- Family socio-economic background as measured by respondent's parents' level of education has a significant relationship with literacy scores in all countries. On average, adults whose parents have a high level of education score higher than adults whose parents have a low level of education. Moreover, the strength of this relationship varies substantially by country.
- A comparison of socio-economic gradients reveals that Norway has the least inequality in among youth from differing socio-economic backgrounds. In contrast, the United States exhibits the largest gap in skill levels by socio-economic background.
- Results suggest that the literacy scores of youth in Canada are on average lower in the ALL survey than in IALS. Moreover, the decline is predominantly among youth who are from lower socio-economic backgrounds, as gauged by parental education. In Norway and the United States, there is little change among the performance of youth between the two survey periods.

- After adjusting for parents' education, youth are on average performing lower than adults aged 26 to 45. Patterns of lower average youth performances in relation to parents' level of education are mixed. In Bermuda, Canada and the United States, youth performance is lower at nearly all levels of parental education. In Italy and Norway, it is lower for average to high levels of parental education, while performance among those whose parents' have low levels of education has improved compared to adults aged 26 to 45.
- The level of engagement in literacy activities at home has a significant impact on literacy scores. The magnitude of the association is similar across all age groups and is in the order of 16 to 20 points on the prose scale for the half of adults who engage in literacy activities the most. The relationship is similar for all age groups. There is an additional positive effect for engaging more in literacy practices at work of about 1 to 14 points, but the effect grows stronger with increasing age.

10.2 The relationship between parents' education and skills of youth

This section considers the impact of parental education upon the skill levels of young adults participating in the ALL study. Children are immersed in the language of their family from the moment they are born (DeCasper *et al.*, 1994; Werker and Tees, 2002; Kisilevsky *et al.*, 2003). Speech emerges naturally, with most children saying their first recognizable word at about 12 months, and thereafter there is rapid, exponential growth in their vocabulary (Huttenlocher *et al.*, 1991). But the pace of language development differs among children, and is related to their exposure to language in the home and the quality of their interactions with their parents (Hart and Risley, 1995). The importance of growing up in a nurturing and language-rich environment during the early years is supported further by studies of the effects of early childhood centres on children's linguistic, cognitive and social abilities (Ramey and Ramey, 1998).

When children reach school-age, they continue to develop their literacy skills both at school and at home. Several large-scale studies of school effectiveness have shown that the school a child attends affects the rate of literacy development (Hill and Crevola, 1999; Scheerens, 1992; Willms, 2001). While curriculum, the quality of classroom teaching and other factors relating to the atmosphere of the school and classroom affect student literacy, results from the Programme for International Student Assessment (PISA) suggest that the family environment also plays an important role during this period (Willms, 2004). Parents' background and their involvement in their child's schooling, exert strong long-term effects on life career outcomes (Epstein and Dauber, 1991; Ho and Willms, 1996; Stevenson and Baker, 1987; Tuijnman, 1989).

The ALL survey collected data to examine the persistence of this observed relationship among young adults. Figure 10.1 displays, for young persons aged 16 to 25, the relationship between literacy scores and parents' education measured in years. Each line was drawn to encompass the range of parents' education within each country from the 5th to the 95th percentiles. The graphs also map the individual prose reading literacy scores and corresponding parents' levels of education (these are the small black dots above and below the gradient lines).

The lines are commonly referred to as “socio-economic gradients”, and they are useful because they portray the relative level of proficiency in each country, and the extent of inequalities among people with differing family socio-economic backgrounds (see Box 10A). The primary indicator of family socio-economic background is the respondent’s parents’ level of education. The research literature supports the notion that adults whose parents have attained higher levels of education are advantaged, not least in terms of better access to wealth, prestige and power, but also in the formation of foundation skills (Desjardins, 2004a).

Socio-economic gradients are summarized by three components: their level, their slope, and the strength of the relationship (see Box 10A).

The levels of the gradients reflect the average prose literacy scores at each level of parental education. On average, Bermuda and Norway have the highest scores at all levels of parental education. This means that independent of the educational investments made by the previous generation these countries were more successful in forming literacy skills among younger generations than other countries. Bermuda and Norway are also among the countries with the lowest socio-economic inequality with respect to prose literacy and parental education, as indicated by their relatively flat gradients. This suggests that they have also been successful at forming literacy skills among those youth whose parents’ have low levels of education.

The slope of the gradients indicates the extent to which parents’ education has influenced the development of literacy skills in their children. A steep slope suggests that youth whose parents have relatively low levels of education tend to be low skilled (Levels 1 and 2), and conversely, youth whose parents have higher levels of education tend to be more skilled. Large differences indicate that access to good literacy instruction and engagement in practices related to skills formation is systematically related to socio-economic differences.

A comparison of slopes suggests that Norway is the most successful at reducing the skills disadvantages that are typically associated with low levels of parental education. On average, there is an approximate 13 point difference between the skills of Norwegians whose parents completed eight years of schooling compared to those who completed 12 years. In contrast, the United States, followed by Canada and Switzerland, has the steepest socio-economic gradient. In the former country, youth whose parents have completed 12 years of schooling score about 39 points higher than those whose parents completed eight years. This difference is about 24 points in Canada and Switzerland, and 22 in Bermuda and Italy.

Although there are disproportionately more youth from low socio-economic backgrounds who score at Levels 1 and 2, there are also many youth at all levels of parental education who display low levels of literacy. In Figure 10.1, this is indicated by the black dots that lie below Level 3. Conversely, in some countries there are many “resilient” youth scoring at Level 4/5 whose parents had relatively low levels of education. This is especially the case in Canada and Norway. But in Switzerland and the United States few youth scoring at Level 4/5 have parents with below average levels of education.

FIGURE 10.1

Socio-economic gradients of youth

Relationship between respondent's prose literacy scores and parents' education in years, populations aged 16 to 25, 2003

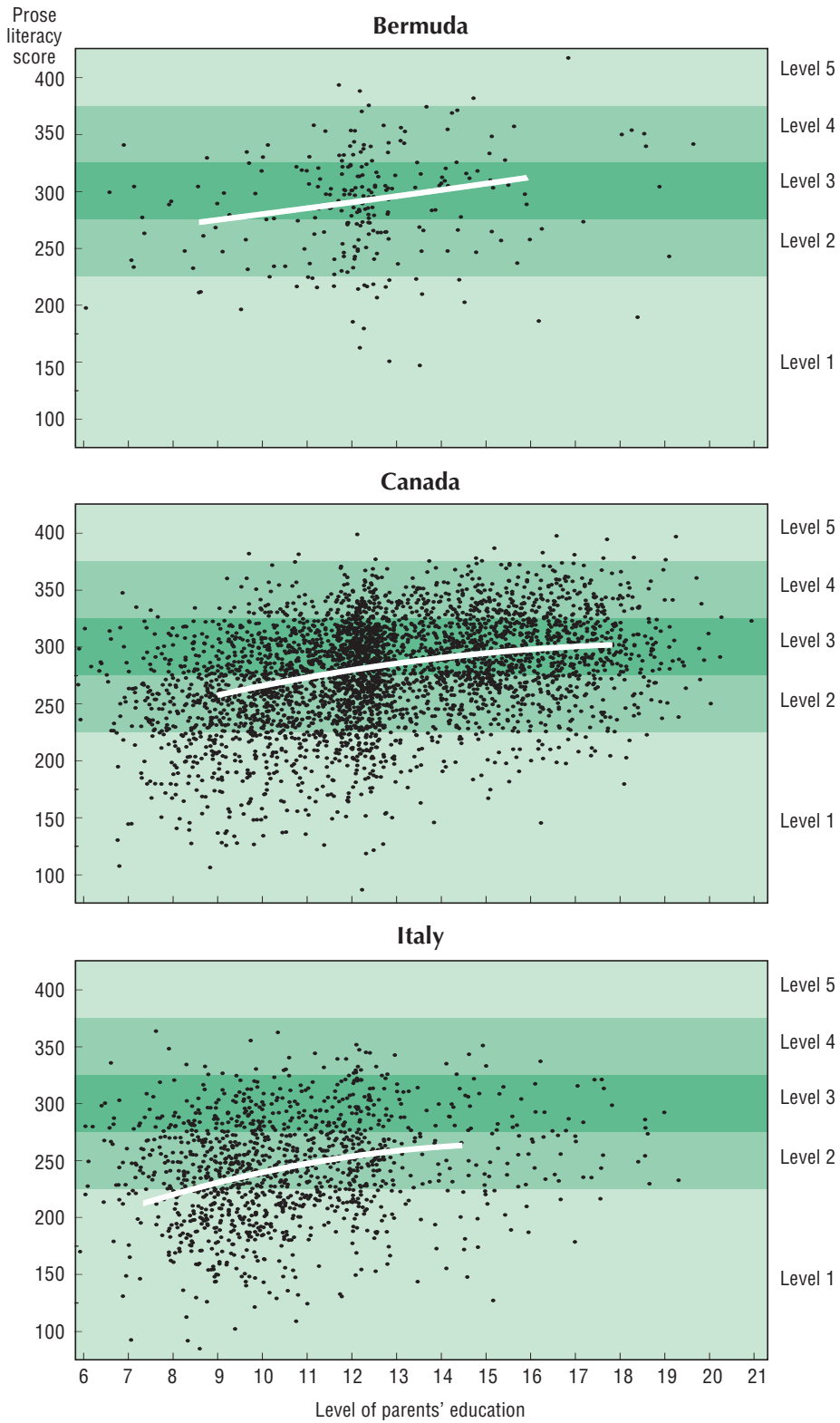
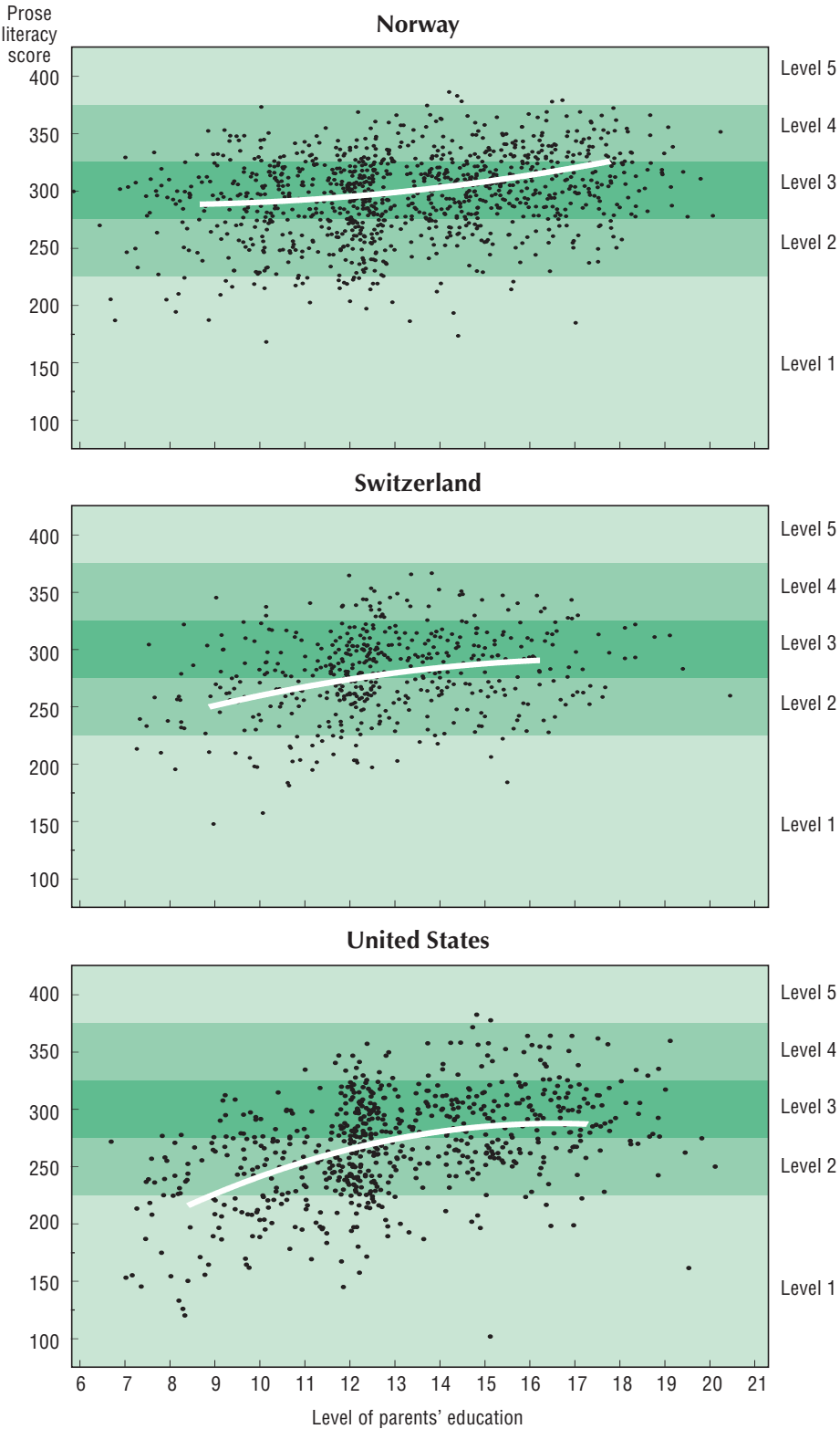


FIGURE 10.1 (concluded)

Socio-economic gradients of youth

Relationship between respondent's prose literacy scores and parents' education in years, populations aged 16 to 25, 2003



Finally, the strength of the gradient should be taken into account. This is indicated by the proportion of variance in literacy performance that is explained by differences in levels of parental education. The strength of this relationship varies substantially by country. It is the weakest in Bermuda and Italy, for example, with only about five and six per cent of the variation in literacy explained by differences in parents' levels of education. In Italy, many youth who score at Levels 3 and 4/5 have parents who also have low levels of education. But there are also many youth whose parents have high levels of education who nevertheless score at Levels 1 and 2. The gradients are strongest in Canada and the United States where about nine and 19 per cent of the variance in prose literacy can be attributed to differences in parental education.

Box 10A

What are socio-economic gradients and what do they show?

A socio-economic gradient describes the relationship between a social outcome and socio-economic status for individuals in a specific jurisdiction, such as a school, a province or state, or a country (Willms, 2002). For the purposes of this analysis, the social outcome is adults' literacy scores on the prose scale. The term socio-economic status (SES) refers to people's relative position on a social hierarchy, based on their access to, or control over, wealth, prestige and power (Mueller and Parcel, 1981). The primary indicator of family SES is the respondent's parents' level of education, and thus the gradients could be simply called "parental education gradients", but for consistency with the literature, they are referred to as socio-economic gradients.

Socio-economic gradients comprise three components: their level, their slope and the strength of the relationship (Willms, 2003):

- a. The *level* of the gradient is defined as the expected score on the outcome measure for a person with a particular level of SES. The *average level* of the gradient is defined as the expected score for those whose parents' have completed the average level of education. The average level of a gradient for a country (or for a province or state, or a school) is an indicator of its average performance, after taking parental background into account.
- b. The *slope* of the gradient indicates the extent of inequality among subpopulations that are attributable to SES. Shallow gradients indicate that there are relatively few inequalities in literacy levels among adults with differing levels of SES. Steep gradients indicate greater inequalities.
- c. The *strength* of the gradient refers to the proportion of variance in literacy performance that is explained by SES. If the strength of the relationship is strong, then a considerable amount of the variation in the outcome measure is associated with SES, whereas a weak relationship indicates that relatively little of the variation is associated with SES. The most common measure of the strength of the relationship is a measure called R-squared, which is the proportion of variance explained.

The ALL and IALS prose and document literacy scales are identical. This allows one to examine whether changes in the relationship between the respondent's prose literacy scores and parents' education have occurred. Note that the IALS data for Canada and the United States were collected in 1994. Data for Norway was gathered in 1998. Figure 10.2 shows the gradients for youth aged 16 to 25 in IALS alongside the comparable results obtained using ALL data. The results suggest that in Canada, the levels of literacy scores for youth have declined during the intervening nine year period. This decline is predominantly among youth who are from lower socio-economic backgrounds. In Norway and the United States the gradients are fairly similar, indicating relatively small changes over the five and nine year periods, respectively.

FIGURE 10.2

Changes in socio-economic gradients of youth from IALS to ALL

Relationship between respondent's prose literacy scores and parents' education in years, populations aged 16 to 25, IALS 1994/1998 and ALL 2003

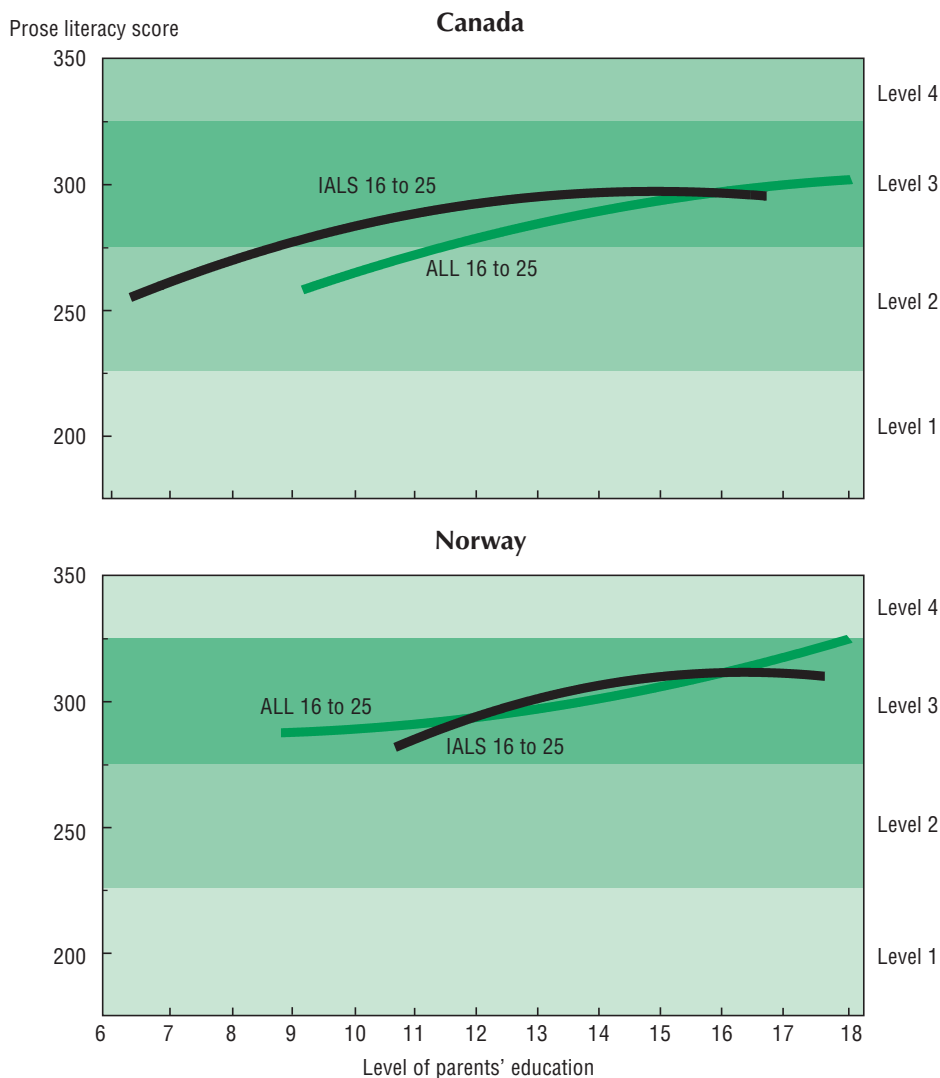
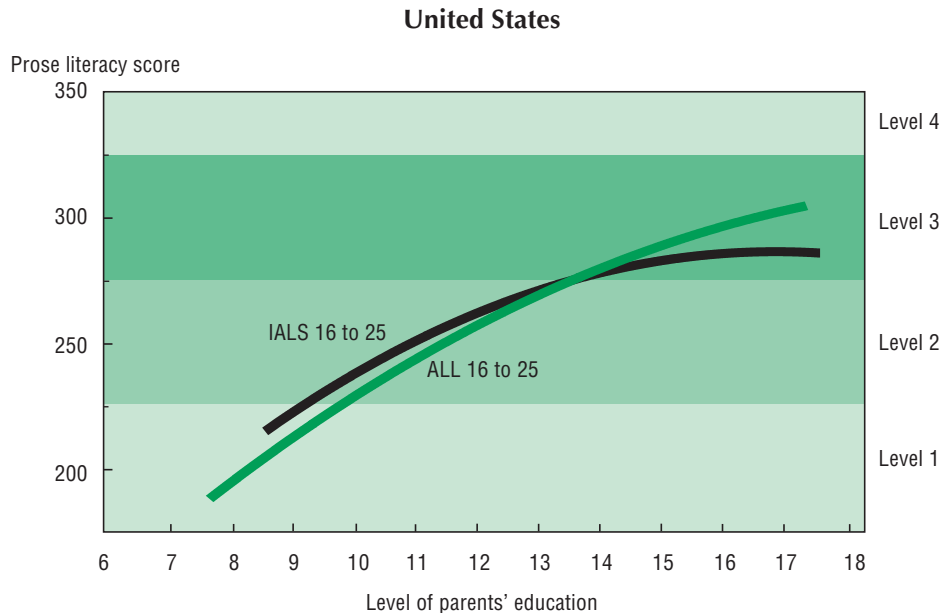


FIGURE 10.2 (concluded)

Changes in socio-economic gradients of youth from IALS to ALL

Relationship between respondent's prose literacy scores and parents' education in years, populations aged 16 to 25, IALS 1994/1998 and ALL 2003



10.3 Comparison of socio-economic gradients for three cohorts of adults

This section extends the analysis of the relationship between parents' education and skills by comparing socio-economic gradients for three cohorts of adults. The three age groups are referred to as youth (16 to 25), early middle age (26 to 45) and late middle age (46 to 65). The results are shown in Figure 10.3.

It is important to reiterate that there are limitations to interpreting data obtained from studies using a cross-sectional design. Ageing, practice, cohort, period and quality of education effects are confounded (see Chapter 2). For example, the literacy skills of adults aged 26 to 45 in the United States and Canada are higher than those of youth aged 16 to 25 at all levels of parental education.

It is possible that older cohorts exhibit higher average skills because of practice effects. By practicing their literacy skills older cohorts may have developed their skills to a higher level. Another explanation could be that the quality of schooling has deteriorated compared with standards set previously. Whatever the precise reason, the results show that the levels of the gradients for youth aged 16 to 25 are lower than the gradients for adults aged 26 to 45 in all countries studied¹ except in the United States. Average score differences between the two cohorts, which adjust for levels of parental education, range from one point on the prose literacy scale in Switzerland to 12 points in Canada. It is interesting to compare these results with Figure 2.7 in Chapter 2, where the skills of youth

aged 16 to 25 are slightly higher on average than the skills of adults aged 26 to 45, but this is without adjusting for parents' levels of education. This implies that the effect of parents' education is substantial.

Patterns of decline in average youth performance among countries are not uniform. In Bermuda, Canada and the United States, current youth performance is lower at nearly all levels of parental education. In Italy and Norway, current average youth performance is lower for average to high levels of parental education, while performance among those whose parents have low levels of education has improved compared to adults aged 26 to 45.

In contrast, the levels of gradients among adults aged 46 to 65 are uniformly lower in Norway and Switzerland at all levels of parental education. This suggests that educational reforms and a web of factors such as improved living standards, health care and nutrition, among others, have had a beneficial impact on all youth regardless of their socio-economic background. In Canada and the United States, however, the group aged 46 to 65 score, on average, somewhat higher once the variance associated with parental education has been removed.

Finally, the socio-economic gradients in Bermuda, Canada, Norway and Italy are steeper for adults aged 46 to 65 than for youth. This suggests that in these countries, there has been a reduction in socio-economic inequalities in recent years. The most marked reduction in observed inequality is in Bermuda and Italy. There is a significant gap of about 36 and 32 points in Bermuda and Italy, respectively, between the average literacy scores of adults whose parents had 12 years of schooling and those whose parents had only eight years of schooling. The comparable gap among the youth is slightly less – about 21 and 22 points – attributable mainly to shallower gradients.

FIGURE 10.3

Socio-economic gradients for three cohorts of adults

Relationship between respondent's prose literacy scores and parents' education in years, populations aged 16 to 25, 26 to 45 and 46 to 65, 2003

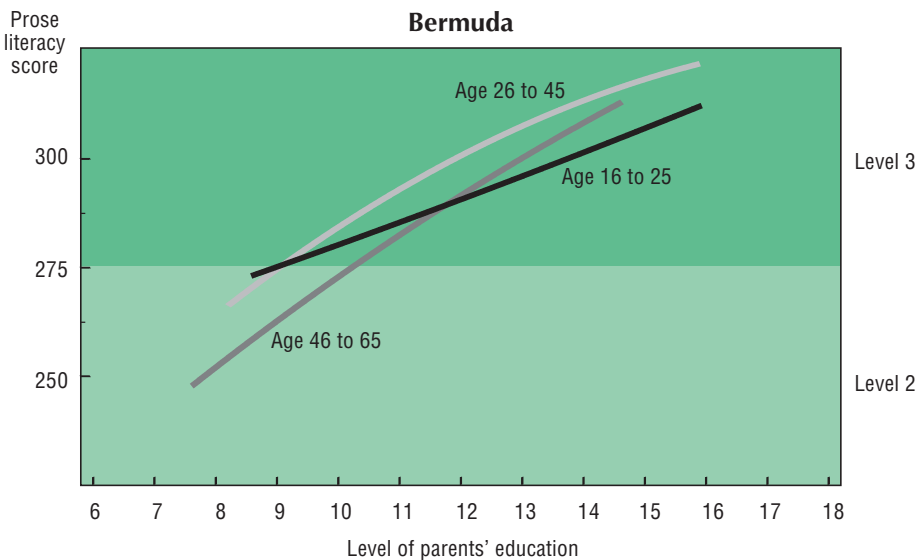


FIGURE 10.3 (continued)

Socio-economic gradients for three cohorts of adults

Relationship between respondent's prose literacy scores and parents' education in years, populations aged 16 to 25, 26 to 45 and 46 to 65, 2003

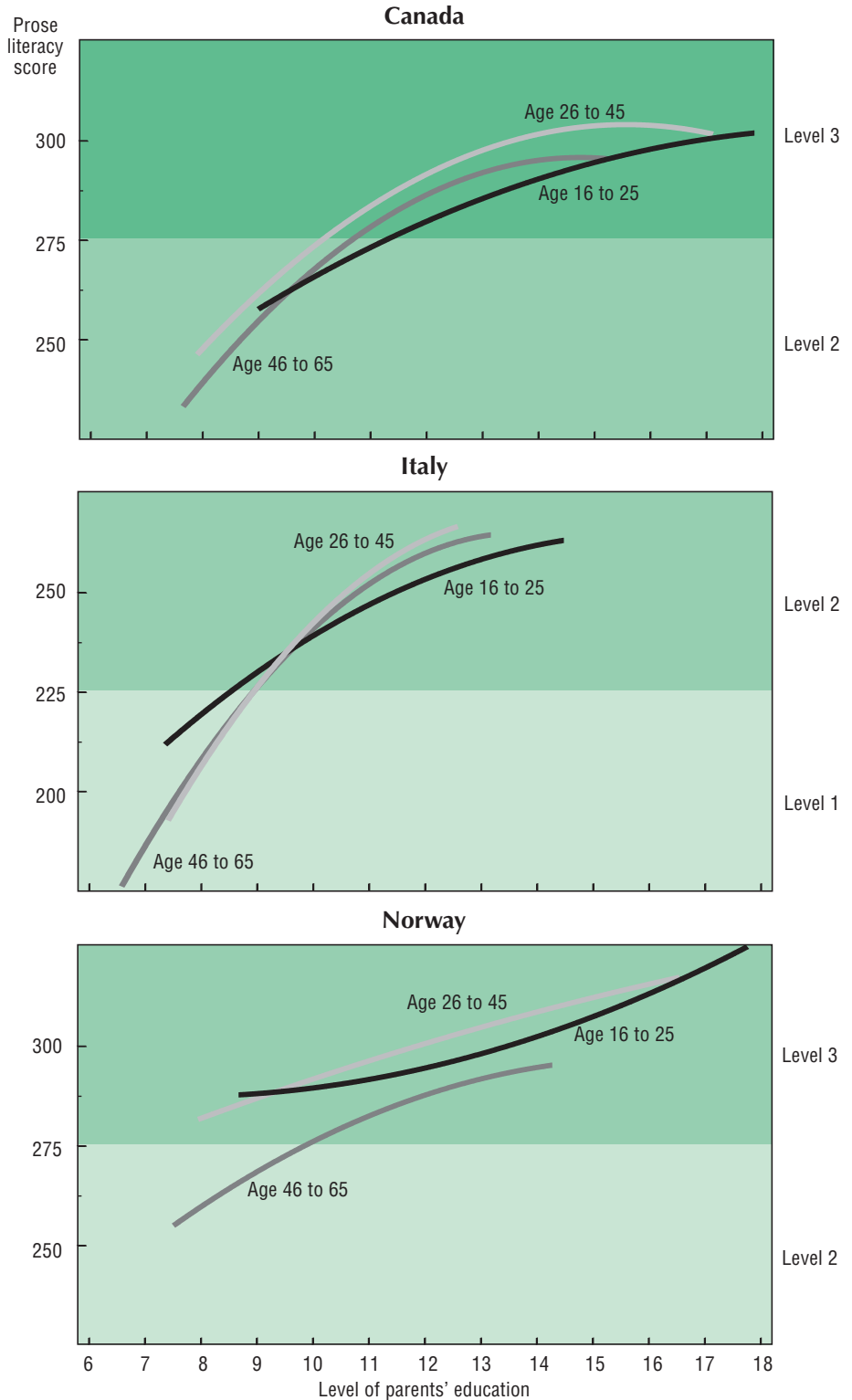
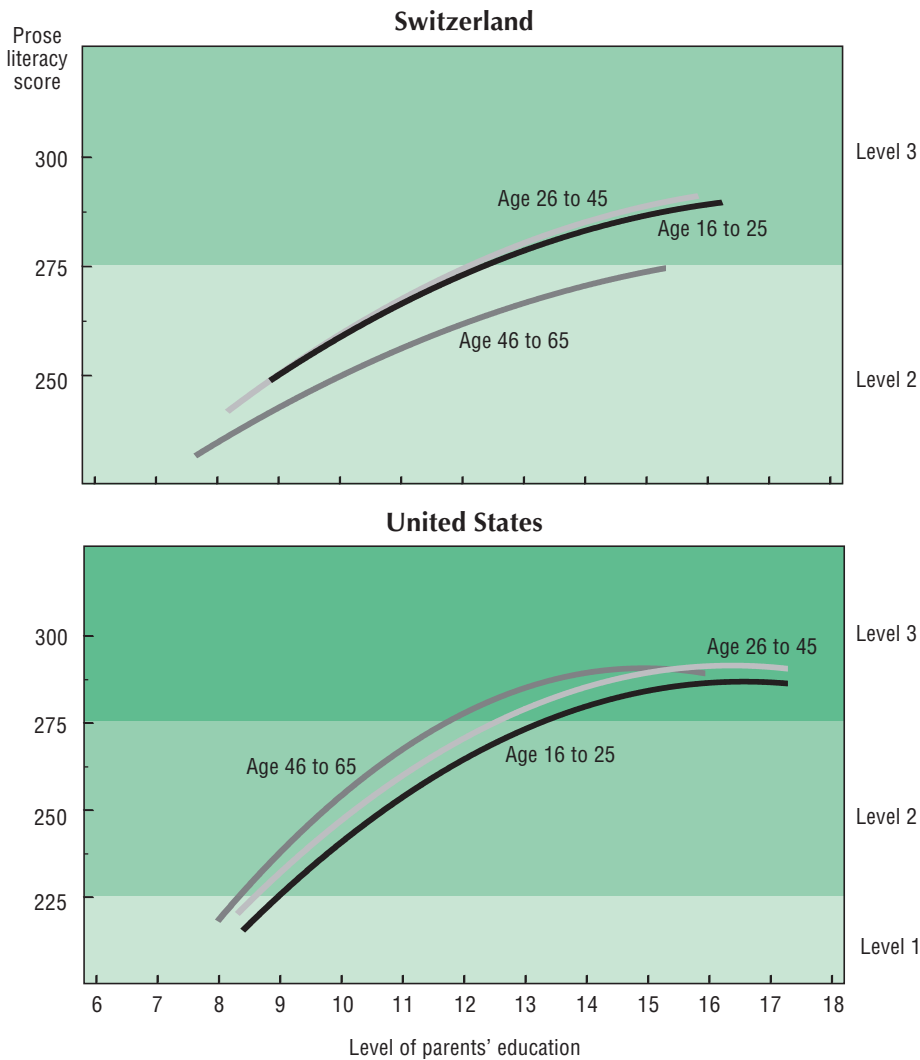


FIGURE 10.3 (concluded)

Socio-economic gradients for three cohorts of adults

Relationship between respondent's prose literacy scores and parents' education in years, populations aged 16 to 25, 26 to 45 and 46 to 65, 2003



10.4 Engagement in literacy practices at home and in daily life

During and beyond schooling age, adult literacy continues to be affected by engagement in literacy activities at home and in daily life (Desjardins, 2004b). Moreover, after the transition period from school to work, a majority of adults are in the workforce and engage in literacy practices at work (see Chapter 6). This section considers the relationship between skills and engagement in literacy activities at home and at work.

To discern the potential impact of engagement, two 10-point scales of engagement in literacy activities at home and at work are constructed (see Box 10B). These measures are included in a multivariate analysis, which use pooled data for the six countries participating in ALL, and adjust for the

respondent's level of education, parents' level of education, and the amount of time they spend watching television or videos each day (see Box 10C). The findings for prose literacy are summarized in Figure 10.4.

Not surprisingly, respondents' level of education has the strongest effect on literacy outcomes among the variables specified. The education effects are shown in relation to upper secondary graduates who are not pursuing post-secondary education. Those who have not completed upper secondary education have lower average scores ranging from about 17 to 31 points depending on the age group. The effect of completing some post-secondary education is about 20 points for all three age groups. Similarly, completing university education has a substantial impact, ranging from about 17 to 31 points.

The effects associated with engagement in literacy activities at work range from very low for youth to nearly three points for every one point increase on the 10-point engagement scale for adults aged 46 to 65. This suggests that literacy practices at work are more important for maintaining literacy skill as people get older. The effect is especially substantial among persons aged 46 to 65, where a five point increase in engagement is associated with an approximate 14 point increase on the prose scale. Although not reported here, the effects are stronger on the document literacy and numeracy scales.

Engaging in literacy activities at home also has a substantial effect. The magnitude is similar to engaging at work but it appears to be more important among younger age groups. This is likely due to the fact that comparatively fewer youth engage in literacy practices at work while there is little difference in patterns of engagement at home across the three age groups.

Among youth, watching TV for five hours or more per day significantly co-varies with lower skill scores. This negative relation to skill is on the order of about 13 points, which nearly corresponds to the skill gain associated with attaining upper secondary education. Even after adjusting for various factors,² the overall results show that the positive relationship between the respondent's prose literacy scores and parents' level of education remains significant. But in a multivariate framework the SES effects are reduced because mediating factors such as the respondents' engagement in literacy practices and their level of education are taken into account (see Kraemer *et al.*, 2001).

Box 10B

Measures of engagement at home and at work

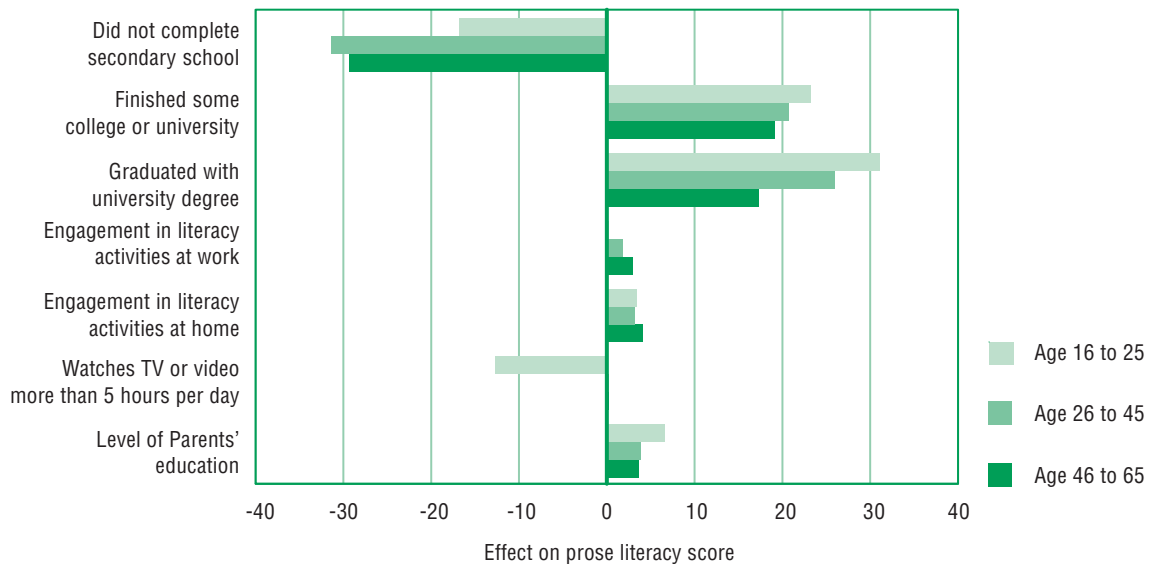
Respondents were asked how often they read or use information from (a) letters, memos, or emails, (b) reports, articles, magazines or journals, and (c) manuals or reference books, including catalogues, (d) diagrams or schematics, (e) directions or instructions, and (f) bills, invoices, spreadsheets or budgets. They were also asked how often they write materials in each of these categories. The engagement in literacy activities at work scale is derived from responses to their frequency in reading or using information in the first three categories above, and writing material in the first two categories. The second scale, engagement in literacy activities at home, is based on respondents' reports of how often they read or used information from newspapers, magazines or books. Both scales were constructed such that one point represents 10 percentile points for the pooled sample. For example, a person scoring at 4.3 would be at the 43rd percentile, while a person at 7.6 would be at the 76th percentile. The median score is 5.0 points.

Box 10C**Multivariate analysis**

Table 10.4 in Annex 10 displays the results of several multiple regression analyses aimed at uncovering the relationship between literacy scores in each of the three domains and people's engagement in literacy activities. The findings represent averages across the participating countries. The first model includes the level of parental education as well as a quadratic term used to measure the curvilinear relationship observed in some countries. The second model includes variables representing parental education, respondents' level of education, their engagement in literacy activities at home and at work, and intensity of TV viewing.

FIGURE 10.4**Literacy skills and literacy practices at home and in daily life**

Relationship between prose literacy scores and engagement in literacy practices at home and in daily life, adjusted for respondent's and parents' education, populations aged 16 to 25, 26 to 45 and 46 to 65, 2003



Note: Estimates that are not statistically different from zero at conventional levels of significance are reported as zero in the figure. For the actual estimate and its corresponding significance, see Table 10.4 in the annex of this chapter.

Source: Adult Literacy and Life Skills Survey, 2003.

Endnotes

1. The results are statistically significant in every country except Switzerland.
2. Respondent's level of education, level of engagement in literacy practices at home and at work, and TV viewing.

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Annex 10

Data Values for the Figures

TABLE 10.1

Relationship between respondent's prose literacy scores and parents' education in years, populations aged 16 to 25, 2003

	Gradient specifications for ALL 2003						
	Average level ¹		Slope ²		Slope squared ³		Strength ⁴
	Estimate		Estimate		Estimate		
Bermuda	290.7 ***	(4.5)	5.3 **	(2.2)	0.05	(0.68)	
Canada	279.9 ***	(2.7)	6.1 ***	(0.91)	-0.40	(0.30)	0.09
Italy	253.2 ***	(3.6)	5.6 ***	(1.3)	-0.69	(0.41)	0.06
Norway	294.7 ***	(2.7)	3.2 ***	(0.9)	0.36	(0.28)	0.08
Switzerland	273.3 ***	(3.9)	6.1 ***	(1.4)	-0.51	(0.59)	0.07
United States	264.6 ***	(3.2)	9.8 ***	(1.1)	-1.07 ***	(0.32)	0.19

** p<0.05, statistically significant at the 5 per cent level.

*** p<0.01, statistically significant at the 1 per cent level.

1. The average level defines the expected score for those whose parents completed the average years of schooling in each country.
2. The slope defines the average effect on prose literacy associated with each additional year of parents' schooling.
3. The estimation model allows for the effect of parents' schooling on skill to be non-linear (i.e., quadratic).
4. The strength is measured by R-square, which is the variance explained.

Source: Adult Literacy and Life Skills Survey, 2003.

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TABLE 10.2

Relationship between respondent's prose literacy scores and parents' education in years, populations aged 16 to 25, IALS 1994/1998

	Gradient specifications for IALS 1994/1998						Strength ⁴
	Average level ¹		Slope ²		Slope squared ³		
	Estimate		Estimate		Estimate		
Canada	293.1 ***	(6.9)	3.2 *	(1.7)	-0.6	(0.6)	0.09
Norway	296.0 ***	(2.9)	7.8 ***	(1.5)	-1.0 ***	(0.3)	0.05
United States	260.3 ***	(5.0)	12.6 ***	(1.5)	-0.7	(0.5)	0.28

* p<0.10, statistically significant at the 10 per cent level.

*** p<0.01, statistically significant at the 1 per cent level.

1. The average level defines the expected score for those whose parents completed the average years of schooling in each country.
2. The slope defines the average effect on prose literacy associated with each additional year of parents' schooling.
3. The estimation model allows for the effect of parents' schooling on skill to be non-linear (i.e., quadratic).
4. The strength is measured by R-square, which is the variance explained.

Source: International Adult Literacy Survey, 1994-1998.

TABLE 10.3

Relationship between respondent's prose literacy scores and parents' education in years, populations aged 16 to 25, 26 to 45 and 46 to 65, 2003

	Average level ¹		Slope ²		Slope squared ³		Strength ⁴
	Estimate		Estimate		Estimate		
A. Gradient specifications for ALL 2003 aged 16 to 25							
Bermuda	290.7 ***	(4.5)	5.3 **	(2.2)	0.1	(0.7)	0.05
Canada	279.9 ***	(2.7)	6.1 ***	(0.9)	-0.4	(0.3)	0.09
Italy	253.2 ***	(3.6)	5.6 ***	(1.3)	-0.7	(0.4)	0.06
Norway	294.7 ***	(2.7)	3.2 ***	(0.9)	0.4	(0.3)	0.08
Switzerland	273.3 ***	(3.9)	6.1 ***	(1.4)	-0.5	(0.6)	0.07
United States	264.6 ***	(3.2)	9.8 ***	(1.1)	-1.1 ***	(0.3)	0.19
B. Gradient specifications for ALL 2003 aged 26 to 45							
Bermuda	300.8 ***	(2.5)	7.3 ***	(1.0)	-0.5	(0.4)	0.09
Canada	291.7 ***	(1.4)	7.0 ***	(0.5)	-1.0 ***	(0.2)	0.11
Italy	263.2 ***	(3.9)	6.6 ***	(1.2)	-1.9 ***	(0.4)	0.05
Norway	300.8 ***	(1.4)	4.2 ***	(0.6)	-0.1	(0.2)	0.06
Switzerland	274.7 ***	(1.9)	6.4 ***	(0.9)	-0.5 *	(0.3)	0.11
United States	270.7 ***	(1.8)	9.6 ***	(0.6)	-1.1 ***	(0.3)	0.18
C. Gradient specifications for ALL 2003 aged 46 to 65							
Bermuda	291.6 ***	(3.4)	8.9 ***	(1.2)	-0.3	(0.5)	0.10
Canada	286.5 ***	(2.1)	6.8 ***	(0.7)	-1.2 ***	(0.3)	0.09
Italy	250.5 ***	(5.6)	7.9 ***	(1.6)	-2.5 ***	(0.8)	0.04
Norway	287.9 ***	(2.4)	4.6 ***	(0.7)	-0.6 *	(0.3)	0.05
Switzerland	262.2 ***	(1.6)	5.2 ***	(1.1)	-0.4	(0.4)	0.07
United States	276.1 ***	(2.9)	7.0 ***	(1.0)	-1.1 **	(0.4)	0.17

* p<0.10, statistically significant at the 10 per cent level.

** p<0.05, statistically significant at the 5 per cent level.

*** p<0.01, statistically significant at the 1 per cent level.

1. The average level defines the expected score for those whose parents' completed the average years of schooling in each country.
2. The slope defines the average effect on prose literacy associated with each additional year of parents' schooling.
3. The estimation model allows for the effect of parents' schooling on skill to be non-linear (i.e., quadratic).
4. The strength is measured by R-square, which is the variance explained.

Source: Adult Literacy and Life Skills Survey, 2003.

TABLE 10.4

**Relationship between prose literacy scores and engagement in literacy practices
at home and in daily life, adjusted for respondent's and parents' education,
populations aged 16 to 25, 26 to 45 and 46 to 65, 2003**

	Aged 16 to 25		Aged 26 to 45		Aged 46 to 65	
	Estimate		Estimate		Estimate	
Did not complete secondary school	-16.89 ***	(3.84)	-31.37 ***	(2.55)	-29.22 ***	(3.83)
Finished some college or university	23.27 ***	(4.69)	20.59 ***	(2.35)	19.11 ***	(3.11)
Graduated with university degree	31.19 ***	(5.11)	25.82 ***	(3.20)	17.38 ***	(3.56)
Engagement in literacy activities at work	0.12	(0.62)	1.71 ***	(0.47)	2.86 ***	(0.56)
Engagement in literacy activities at home	3.34 ***	(0.63)	3.10 ***	(0.52)	4.05 ***	(0.46)
Watches TV or video 2 to 5 hours per day	-3.01	(2.39)	3.00	(2.29)	3.37	(2.74)
Watches TV or video more than 5 hours per day	-12.76 ***	(3.87)	-4.61	(4.68)	-3.98	(3.53)
Level of parents' education	6.70 ***	(0.80)	3.90 ***	(0.40)	3.59 ***	(0.59)
Level of parents' education squared	-0.97 ***	(0.25)	-0.67 ***	(0.18)	-0.91 ***	(0.21)
R-Squared, explained variance	0.28		0.34		0.39	

*** p<0.01, statistically significant at the 1 per cent level.

Source: Adult Literacy and Life Skills Survey, 2003.

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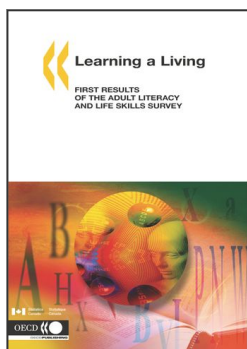
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