

## Highlights From the 2003 International Adult Literacy and Lifeskills Survey (ALL)

### Background

The Adult Literacy and Lifeskills Survey (ALL) is an international comparative study conducted in 2003 to provide participating countries with information about the skills of their adult populations. ALL measured the literacy and numeracy skills of a nationally representative sample of 16- to 65-year-olds from six participating countries (Bermuda, Canada, Italy, Norway, Switzerland, and the United States). Literacy is defined as the knowledge and skills needed to understand and use information from text and other written formats. Numeracy applies to the knowledge and skills required to manage mathematical demands of diverse situations. A second phase of ALL, in which additional countries are collecting data, is currently under way. This will allow for a greater number of country comparisons.

ALL builds upon earlier national and international studies of adult literacy.<sup>1</sup> Information from ALL addresses questions such as:

- What is the distribution of literacy and numeracy skills among American adults? How do these skill distributions compare to those of other countries?

- What is the relationship between these literacy skills and the economic, social, and personal characteristics of individuals? For example: Do different age or linguistic groups manifest different skill levels? Do males and females perform differently? At what kinds of jobs do people at various literacy levels work? What wages do they earn? How do adults who have completed different levels of education perform?
- What is the relationship between these skills and the economic and social characteristics of nations? For example, how do the skills of the adult labor force of a country match with areas of the economy that are growing?

The purpose of this Issue Brief is to provide selected initial findings from ALL, so the Issue Brief will address only some of these questions. For further results from ALL, see *Learning a Living: First Results of the Adult Literacy and Life Skills Survey* (Statistics Canada and Organization for Economic Cooperation and Development 2005). A technical report for ALL, which describes in detail the procedures used in the design, data collection, quality control, and analysis for the study, is also forthcoming.

### Study Description

ALL consisted of two components:

- A background questionnaire designed to collect general participant information (such as sex, age, race/ethnicity, education level, and labor force status) and more targeted questions related to literacy practices, familiarity with information and communication technology, education coursetaking, and health.
- A written assessment of the skills of participants in literacy and numeracy.

Trained interviewers administered approximately 45 minutes of background questions and 60 minutes of assessment items to participants in their homes. Sample items can be found online with this Issue Brief and at <http://nces.ed.gov/surveys/all>. In the United States, a nationally representative sample of 3,420 adults ages 16–65 participated in ALL. Data collection for the United States took place between January and June 2003.

Data in this Issue Brief are shown at the national level for six countries: Bermuda, Canada, Italy, Norway, Switzerland, and the United States. Subnational estimates (for French- and English-speaking Canada, for instance) and estimates for the participating state of Nuevo León in Mexico are available in

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<sup>1</sup> An assessment of young adult literacy was conducted in the United States in 1985, an assessment of the literacy of job seekers in 1991, a National Adult Literacy Survey (NALS) in 1992, and a follow-up to NALS, the National Assessment of Adult Literacy (NAAL), was conducted in 2003. ALL is the direct successor to the International Adult Literacy Survey (IALS), which was conducted in three phases (1994, 1996, and 1998) in 20 nations, including the United States. IALS measured adults' prose, document, and quantitative literacy skills. Prose literacy items are made up of continuous texts (formed of sentences organized into paragraphs). Document literacy items are made up of noncontinuous texts (tables, schedules, charts, graphs, or other texts with clearly defined rows and columns). In IALS, the quantitative literacy scale was made up of continuous and noncontinuous texts in which respondents had to identify and perform one or more arithmetic operations. This scale was replaced with the numeracy scale in ALL, so that change over time can be measured only for prose literacy and document literacy. The numeracy scale was designed to be broader than the quantitative literacy scale, going beyond applying arithmetic skills to a wider range of mathematical skills (e.g., use of number sense, estimation, statistics). An additional skill area, problem solving, was assessed in other participating countries in ALL in 2003; however, the United States did not collect this information. For results in problem solving, see Statistics Canada and Organization for Economic Cooperation and Development (OECD) (2005).

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### Overall Performance of U.S. Adults

In this Issue Brief, prose literacy and document literacy scores are combined into a single literacy score measured on a scale of 0–500 points. Numeracy scores also range from 0–500. U.S. adults had an average literacy score of 269 and a score of 261 in numeracy (table 1). The United States outperformed Italy in literacy and numeracy, but was outperformed by Bermuda, Canada, Norway, and Switzerland in both skill areas.

**Table 1. Average literacy and numeracy scores of 16- to 65-year-olds, by country: 2003**

Literacy		Numeracy	
Country	Score	Country	Score
Norway	293	Switzerland	290
Bermuda	285	Norway	285
Switzerland	274	Bermuda	270
Canada	281	Canada	272
<b>United States</b>	<b>269</b>	<b>United States</b>	<b>261</b>
Italy	228	Italy	233

- Score is significantly higher than the U.S. average
  - Score is not significantly different from the U.S. average
  - Score is significantly lower than the U.S. average
- NOTE: Participants were scored on a 500-point scale.

SOURCE: Statistics Canada and Organization for Economic Cooperation and Development (OECD), Adult Literacy and Lifeskills Survey (ALL), 2003.

In addition to average scores, it can also be informative to examine how well high and low performers scored in each country. Score differences between high and low performers can also help illustrate how widely performance within a country varies.

In both literacy and numeracy, adults in Bermuda, Canada, and Norway had higher scores than U.S. adults at both the high and low ends of the score distribution. The highest performers (the top 10 percent of adults) had literacy scores of 353 or higher in Bermuda, 344 or higher in Canada, and 348 or higher in Norway, compared to 333 or higher in the United States. The lowest performers (those in the bottom 10 percent) in Bermuda, Canada, and Norway also outscored their peers in the United States in both literacy and numeracy.

The difference in literacy and numeracy scores between the highest and lowest performers in Norway (approximately 114

points for literacy and 118 points for numeracy) was smaller than in the United States (where it was 132 points for literacy and 149 points for numeracy). In Bermuda and Canada, the differences between high and low achievers in literacy and numeracy were not measurably larger than the U.S. differences. In other words, although literacy scores for Bermudans, Canadians, and Norwegians on average were higher than in the United States, in Bermuda and Canada scores were spread to about the same degree as in the United States, while in Norway there was less variation in scores.

Switzerland’s low performers outscored U.S. low performers in literacy, while their high performers did not score measurably differently. Swiss adults outperformed U.S. adults throughout the distribution in numeracy, and the differences between high and low performers in literacy and numeracy were smaller than in the United States. In contrast, Italian adults scored consistently lower than U.S. adults throughout the distribution in both literacy and numeracy.

### Performance of U.S. Adults by Sex and Race/Ethnicity

There was no measurable difference in the literacy performance of men and women in Bermuda, Canada, Norway, or the United States (figure 1). However, in Italy and Switzerland, men outscored women. Men outperformed women on the numeracy scale in every country, with a range from 11 points (Italy) to 16 points (Switzerland). In the United States, men scored 15 points higher than women on the numeracy scale.

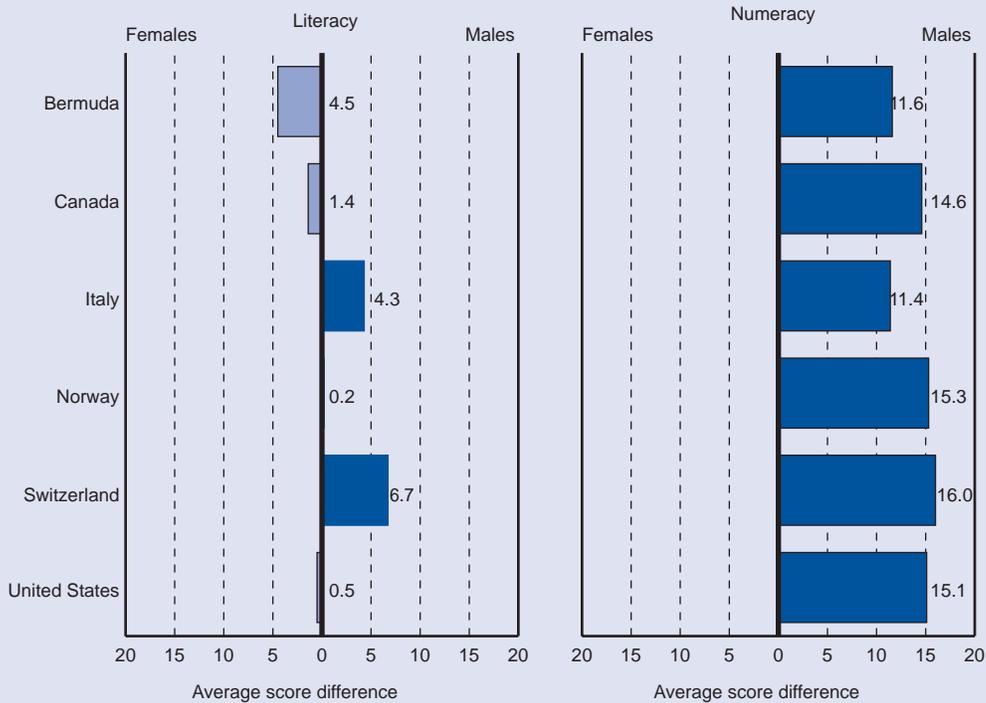
Racial and ethnic groups vary between countries, so it is not feasible to compare their performance across countries on international assessments. Findings are therefore reported here for the United States only. White U.S. adults outscored Black, Hispanic, and Other adults in both literacy and numeracy (figure 2).

There was no measurable difference in the performance of Blacks and Hispanics in literacy or numeracy.

### References

Statistics Canada and Organization for Economic Cooperation and Development (OECD). (2005). *Learning a Living: First Results of the Adult Literacy and Life Skills Survey*. Ottawa and Paris: Author.

**Figure 1. Differences in average scores of 16- to 65-year old males and females in literacy and numeracy, by country: 2003**

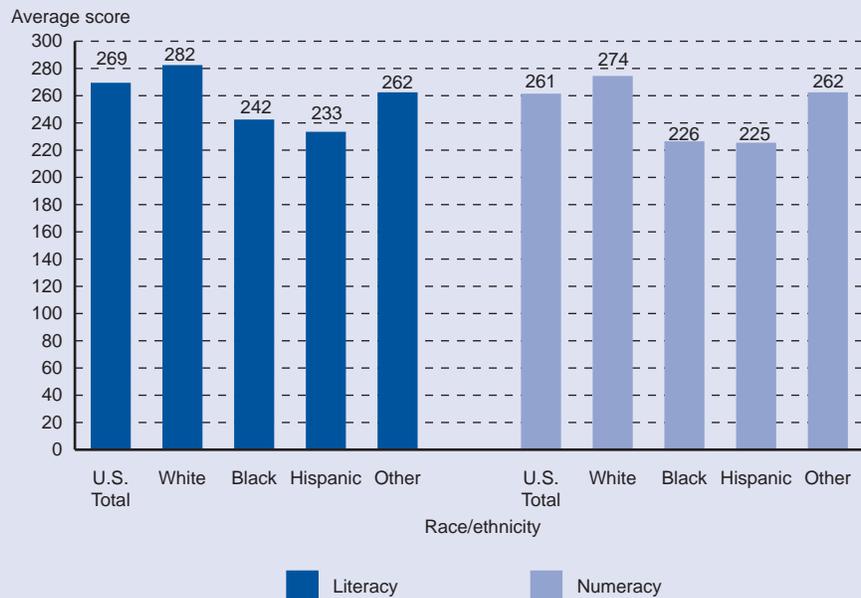


■ Average score difference is statistically significant.  
 ■ Average score difference is not statistically significant.

NOTE: Each bar above represents the average score difference between males and females.

SOURCE: Statistics Canada and Organization for Economic Cooperation and Development (OECD), Adult Literacy and Lifeskills Survey (ALL), 2003.

**Figure 2. Average literacy and numeracy scores of U.S. 16- to 65-year-olds, by race/ethnicity: 2003**



NOTE: "White" refers to non-Hispanic White adults, "Black" to non-Hispanic Black adults, and "Hispanic" to Hispanic respondents of any race. "Other" includes adults who selected more than one race and groups (such as Asians, American Indians, or Alaska Natives) for which sample sizes are too small to reliably estimate scores. Participants were scored on a 500-point scale.

SOURCE: Statistics Canada and Organization for Economic Cooperation and Development (OECD), Adult Literacy and Lifeskills Survey (ALL), 2003.

The Issue Brief series presents information on education topics of current interest. All estimates shown are based on samples and are subject to sampling variability. All differences discussed in the text are statistically significant at the .05 level. Standard errors and sample items for this Issue Brief can be found on the Web at <http://nces.ed.gov/pubinfo.asp?pubid=2005117>. For more information on ALL, visit <http://nces.ed.gov/surveys/all> or <http://www.ets.org/all>.

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