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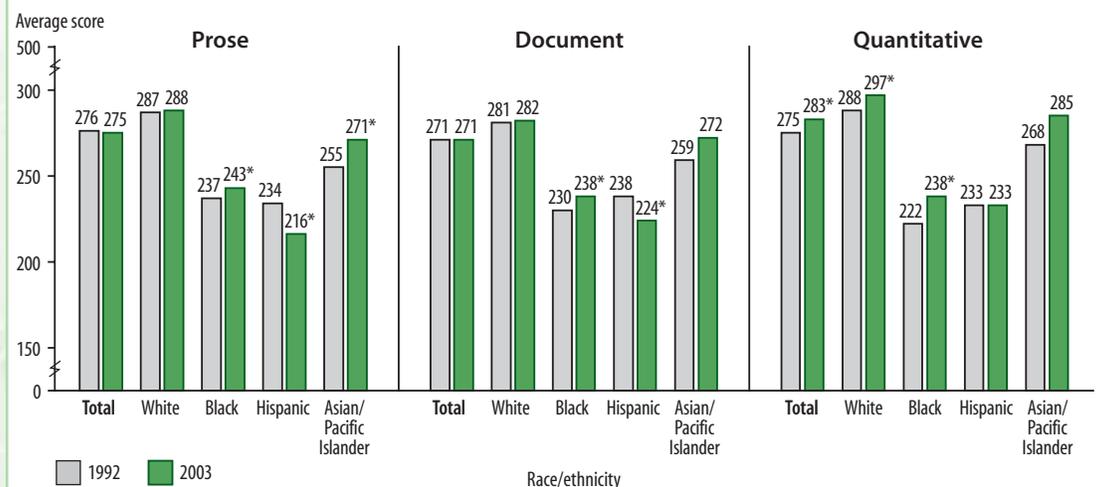
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## Average Prose and Document Literacy Scores Rise for Blacks and Asians But Decrease Among Hispanics

The 2003 National Assessment of Adult Literacy (NAAL) measures the English literacy of America's adults (people age 16 and older living in households or prisons). The average quantitative literacy scores of adults increased 8 points between 1992 and 2003, though average prose and document literacy did not differ significantly from 1992 (figure 1).

Among Blacks, average prose literacy scores increased by 6 points and average document literacy scores rose by 8 points between 1992 and 2003 (figure 1). The average prose scores of Asians/Pacific Islanders increased as well, rising 16 points between 1992 and 2003. The average prose literacy scores of Hispanics fell 18 points from 1992 to 2003, while average document literacy scores decreased by 14 points. Average prose and document literacy scores among Whites did not change significantly. (Differences are discussed in this report only if they were found to be statistically significant at the .05 level. Standard errors for all tables and figures in this report are available on the NAAL website.)

**Figure 1. Average prose, document, and quantitative literacy scores of adults, by race/ethnicity: 1992 and 2003**



\* Significantly different from 1992.

NOTE: Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure. In 1992, respondents were allowed to identify only one race. In 2003, respondents were allowed to identify multiple races. In 2003, 2 percent of respondents identified multiple races and are not included in the White, Black, or Asian/Pacific Islander categories in this figure. All adults of Hispanic origin are classified as Hispanic, regardless of race. The Asian/Pacific Islander category includes Native Hawaiians. Total includes White, Black, Hispanic, Asian/Pacific Islander, American Indian/Alaska Native, and Multiracial/Other. Although not reported separately, American Indians/Native Alaskans are included.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

## Description of Literacy Levels

The National Center for Education Statistics (NCES) asked the National Research Council's Board on Testing and Assessment (BOTA) to recommend a set of literacy levels for the 2003 assessment

that would permit comparisons with results from the 1992 assessment.

Drawing on recommendations from BOTA's Committee on Performance Levels for Adult

Literacy, NCES has decided to report the assessment results by using four literacy levels. Descriptions of the abilities associated with each level and the types of tasks that adults at each level could complete are

presented in table 1 on the following page. The complete BOTA report explaining their methodology in setting levels is available on the Web at <http://books.nap.edu/catalog/11267.html>.

### Defining Literacy

The assessment defines literacy as "using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential." Results are reported on three literacy scales (see Sample Assessment Questions section of the report):

#### Prose Literacy

The knowledge and skills needed to perform prose tasks (i.e., to search, comprehend, and use information from continuous texts).

#### Document Literacy

The knowledge and skills needed to perform document tasks (i.e., to search, comprehend, and use information from noncontinuous texts in various formats).

#### Quantitative Literacy

The knowledge and skills required to perform quantitative tasks (i.e., to identify and perform computations, either alone or sequentially, using numbers embedded in printed materials).

## Assessment Design

Unlike indirect measures of literacy, which rely on self-reports of literacy skills or educational attainment, the assessment measures literacy by asking respondents to demonstrate that they understand the meaning of information found in texts they are asked to read.

The literacy tasks in the assessment were drawn from actual texts and documents, which were either used in their original format or reproduced in the assessment booklets. Each question appeared before the materials needed to answer it, thus encouraging respondents to read with purpose.

Respondents could correctly answer many assessment questions by skimming the text or document for the information necessary to perform a given literacy task. All tasks were open-ended.

A total of 152 prose, document, and quantitative literacy tasks were included in the

2003 assessment. Sixty-five of the tasks were taken from the 1992 survey and 87 were developed for the 2003 assessment. Tasks from the 1992 survey were included in the 2003 assessment to measure changes in literacy between 1992 and 2003.

Asking each respondent to complete all the tasks would be too time-consuming, so the tasks were organized into 13 unique blocks. Respondents were asked to complete an assessment booklet that included seven literacy screening tasks (with questions asked in either English or Spanish but based upon written materials presented in English only) common to all booklets, followed by three blocks of tasks.

Adults who were unable to answer a minimum number of literacy screening tasks, but who were able to communicate in either English or Spanish, were administered an alternative assessment with

questions asked orally in either English or Spanish based upon printed materials presented in English only. Adults who were not screened into the alternative assessment and completed the main assessment attempted approximately 40 literacy tasks (administered in English only). To compare results between 1992 and 2003, the 1992 results were rescaled using the criteria and methods established for the 2003 assessment.

The assessment also included a background questionnaire that was used to collect data about the relationship between literacy and various demographic and background characteristics. The background questionnaire was administered before the assessment and the questions were asked orally in either English or Spanish.

See Population and Sample Size, and Data Collection Procedures section of this report for more information about the assessment.

**Table 1. Overview of the literacy levels**

Level and definition	Key abilities associated with level	Sample tasks typical of level
<p><b>Below Basic</b> indicates no more than the most simple and concrete literacy skills. Score ranges for <i>Below Basic</i>:</p> <p>Prose: 0–209 Document: 0–204 Quantitative: 0–234</p>	<p>Adults at the <i>Below Basic</i> level range from being nonliterate in English to having the abilities listed below:</p> <ul style="list-style-type: none"> <li>■ locating easily identifiable information in short, commonplace <b>prose</b> texts</li> <li>■ locating easily identifiable information and following written instructions in simple <b>documents</b> (e.g., charts or forms)</li> <li>■ locating numbers and using them to perform simple <b>quantitative</b> operations (primarily addition) when the mathematical information is very concrete and familiar</li> </ul>	<ul style="list-style-type: none"> <li>■ searching a short, simple text to find out what a patient is allowed to drink before a medical test</li> <li>■ signing a form</li> <li>■ adding the amounts on a bank deposit slip</li> </ul>
<p><b>Basic</b> indicates skills necessary to perform simple and everyday literacy activities. Score ranges for <i>Basic</i>:</p> <p>Prose: 210–264 Document: 205–249 Quantitative: 235–289</p>	<ul style="list-style-type: none"> <li>■ reading and understanding information in short, commonplace <b>prose</b> texts</li> <li>■ reading and understanding information in simple <b>documents</b></li> <li>■ locating easily identifiable <b>quantitative</b> information and using it to solve simple, one-step problems when the arithmetic operation is specified or easily inferred</li> </ul>	<ul style="list-style-type: none"> <li>■ finding in a pamphlet for prospective jurors an explanation of how people were selected for the jury pool</li> <li>■ using a television guide to find out what programs are on at a specific time</li> <li>■ comparing the ticket prices for two events</li> </ul>
<p><b>Intermediate</b> indicates skills necessary to perform moderately challenging literacy activities. Score ranges for <i>Intermediate</i>:</p> <p>Prose: 265–339 Document: 250–334 Quantitative: 290–349</p>	<ul style="list-style-type: none"> <li>■ reading and understanding moderately dense, less commonplace <b>prose</b> texts as well as summarizing, making simple inferences, determining cause and effect, and recognizing the author's purpose</li> <li>■ locating information in dense, complex <b>documents</b> and making simple inferences about the information</li> <li>■ locating less familiar <b>quantitative</b> information and using it to solve problems when the arithmetic operation is not specified or easily inferred</li> </ul>	<ul style="list-style-type: none"> <li>■ consulting reference materials to determine which foods contain a particular vitamin</li> <li>■ identifying a specific location on a map</li> <li>■ calculating the total cost of ordering specific office supplies from a catalog</li> </ul>
<p><b>Proficient</b> indicates skills necessary to perform more complex and challenging literacy activities. Score ranges for <i>Proficient</i>:</p> <p>Prose: 340–500 Document: 335–500 Quantitative: 350–500</p>	<ul style="list-style-type: none"> <li>■ reading lengthy, complex, abstract <b>prose</b> texts as well as synthesizing information and making complex inferences</li> <li>■ integrating, synthesizing, and analyzing multiple pieces of information located in complex <b>documents</b></li> <li>■ locating more abstract <b>quantitative</b> information and using it to solve multistep problems when the arithmetic operations are not easily inferred and the problems are more complex</li> </ul>	<ul style="list-style-type: none"> <li>■ comparing viewpoints in two editorials</li> <li>■ interpreting a table about blood pressure, age, and physical activity</li> <li>■ computing and comparing the cost per ounce of food items</li> </ul>

NOTE: Although the literacy levels share common names with the NAEP levels, they do not correspond to the NAEP levels.

SOURCE: Hauser, R.M., Edley, C.F. Jr., Koenig, J.A., and Elliott, S.W. (Eds.). (2005). *Measuring Literacy: Performance Levels for Adults, Interim Report*. Washington, DC: National Academies Press; White, S. and Dillow, S. (2005). *Key Concepts and Features of the 2003 National Assessment of Adult Literacy* (NCES 2006-471). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

## Changes in Adult Literacy

The percentage of adults (people age 16 and older living in households or prisons) with *Below Basic* document literacy decreased 2 percentage points between 1992 and 2003 and the percentage of adults with *Below Basic* quantitative literacy decreased by 4 percentage points (figure 2). The percentage of adults with *Basic* literacy did not change significantly between 1992

and 2003 on any of the three scales. The percentage of adults with *Intermediate* document literacy increased by 4 percentage points and the percentage of adults with *Intermediate* quantitative literacy increased by 3 percentage points. The percentage of adults with *Proficient* prose and document literacy decreased 2 percentage points between 1992 and 2003.

## Nonliterate in English

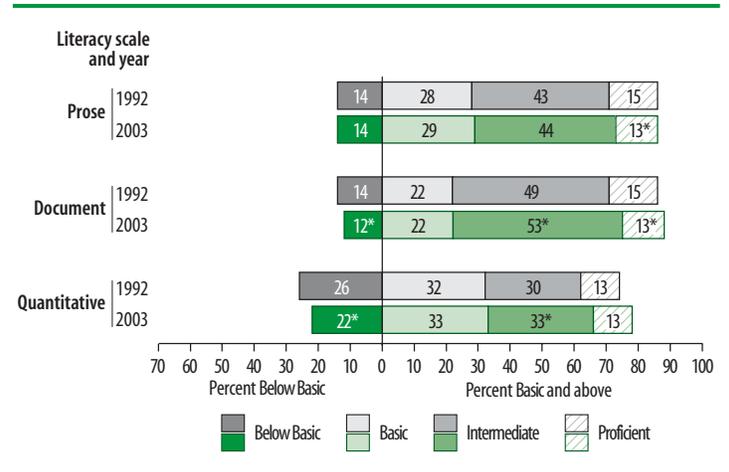
An additional component of the adult population (defined as people age 16 and older living in households or prisons) is not shown in figure 2. Field interviewers determined that 2 percent of adults in 2003 and 3 percent in 1992 could not be tested because they spoke a language other than English or Spanish and were unable to communicate in English or Spanish. These adults are included in the population that is the basis for the percentages in figure 3, but not in the population of adults that is the basis for figure 2 and the other figures in this report, because there is little or no background data on adults who could not be tested.

In 2003, about 3 percent of adults took an alternative assessment because they were

unable to complete a minimum number of simple literacy screening questions. These adults also performed in the *Below Basic* category in figure 2. Questions on the alternative assessment were asked in either English or Spanish, but all written materials were in English only. While some of these individuals were able to identify letters, numbers, and simple words and phrases, most were unable to read and understand connected text in English. These adults are also nonliterate in English.

For 2003, these two groups of adults who were nonliterate in English—the 2 percent who could not be tested because they could not communicate in English or Spanish and the 3 percent who received the alternative

**Figure 2. Percentage of adults in each literacy level: 1992 and 2003**

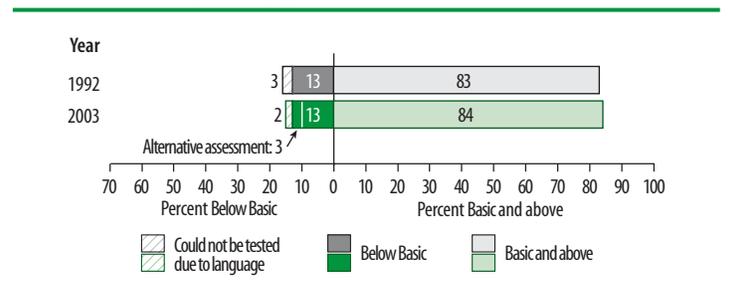


\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

**Figure 3. Percentage of adults in selected prose literacy levels, including adults who could not be tested: 1992 and 2003**



NOTE: Adults are defined as people 16 years of age and older living in households or prisons. Results do not add to 100 percent; adults who could not be interviewed because of cognitive or mental disabilities are not included in the totals.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

assessment—account for 5 percent of the population (11 million). For 1992, the corresponding percentage could not be estimated. An unknown proportion of the *Below Basic* population in that year would have required such an alternative assessment, but it was not available then. In

addition to the adults who could not be tested because of a language difficulty (3 percent in 1992 and 2 percent in 2003), other adults could not be tested because of a cognitive or mental disability that precluded conducting the interview (1 percent in 1992 and 1 percent in 2003).

## Profile of Adults With *Below Basic* Prose Literacy

In 2003, 14 percent of American adults (defined as people age 16 and older living in households or prisons) had *Below Basic* prose literacy (figure 2). Examining the characteristics of these adults provides a profile of the adults with the lowest prose literacy performance.

Hispanics, who represent 12 percent of the NAAL population, accounted for 39 percent of the adults with *Below Basic* prose literacy (table 2). Twenty percent of adults with *Below Basic* prose literacy were Black. In contrast, while 70 percent of the NAAL population is White, 37 percent of adults with *Below Basic* prose literacy were White.

Adults age 65 or older represent 15 percent of the NAAL population but 26 percent of adults in the lowest prose literacy level (table 2). Although 35 percent of adults with *Below Basic* prose literacy spoke Spanish or Spanish and

another non-English language before starting school, these individuals account for 8 percent of the population.

Adults without a high school degree or GED represent 15 percent of the total NAAL population but 55 percent of the adults in the lowest prose literacy level (table 2). Fifty-two percent of adults in the total NAAL population completed at least some education beyond high school, compared to 14 percent of adults with *Below Basic* prose literacy.

Forty-six percent of adults with *Below Basic* prose literacy had one or more disabilities, compared to 30 percent of adults in the NAAL population (table 2). The percentage of adults with multiple disabilities in the *Below Basic* prose level (21 percent) was significantly higher than the percentage of adults with multiple disabilities in the NAAL population (9 percent).

**Table 2. Percentage of adults with selected characteristics in the *Below Basic* prose literacy level and in the total NAAL population: 2003**

Characteristic	<i>Below Basic</i>	Total NAAL population
<b>Race/ethnicity</b>		
White	37	70
Black	20	12
Hispanic	39	12
Asian/Pacific Islander	4	4
<b>Gender</b>		
Male	46	49
Female	54	51
<b>Age</b>		
16–18	5	6
19–24	9	11
25–39	25	28
40–49	16	20
50–64	20	21
65+	26	15
<b>Language spoken before starting school</b>		
English only	52	81
English and Spanish	2	2
English and other language	2	4
Spanish	35	8
Other language	9	5
<b>Educational attainment</b>		
Less than/some high school	55	15
GED/high school equivalency	4	5
High school graduate	23	26
Vocational/trade/business school	4	6
Some college	4	11
Associate's/2-year degree	3	12
College graduate	2	12
Graduate studies/degree	1	11
<b>Disability status</b>		
Vision problem only	7	5
Hearing problem only	4	5
Learning disability only	4	3
Other disability only	10	8
Multiple disabilities	21	9
No disabilities	54	70

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this table. In 1992, respondents were allowed to identify only one race. In 2003, respondents were allowed to identify multiple races. In 2003, 2 percent of respondents identified multiple races and are not included in the White, Black, or Asian/Pacific Islander categories in this table. All adults of Hispanic origin are classified as Hispanic, regardless of race. The Asian/Pacific Islander category includes Native Hawaiians. The English and Spanish category includes adults who spoke only English and Spanish, as well as adults who spoke English, Spanish, and another non-English language. The Spanish category includes adults who spoke only Spanish, as well as adults who spoke Spanish and another non-English language. The Other language category includes only adults who did not speak English or Spanish.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy.

## Literacy by Gender

In 2003, average prose literacy and average document literacy were higher for women than for men, while average quantitative literacy was higher for men than for women (figure 4).

Between 1992 and 2003, the average prose score for women remained at 277, while the average prose score for men decreased by 4 points (figure 4). On the document literacy scale, women gained 4 points between

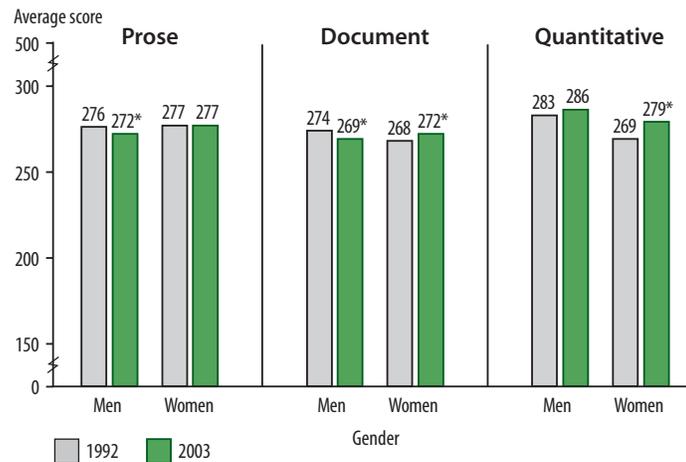
1992 and 2003, while the average score for men dropped by 5 points.

In 2003, the average quantitative literacy score for women increased 10 points from 1992, while average

quantitative literacy for men was not significantly different from 1992 (figure 4).

The distribution of men and women across the literacy levels also changed between 1992 and 2003 (figures 5, 6, and 7).

**Figure 4. Average prose, document, and quantitative literacy scores of adults, by gender: 1992 and 2003**



\* Significantly different from 1992.

NOTE: Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

On the quantitative scale, for example, the percentage of men and women with *Below Basic* literacy decreased between 1992 and 2003 (figure 7). For men, the percentage with *Below Basic* quantitative literacy declined by 3 per-

centage points, while the percentage of women with *Below Basic* quantitative literacy fell by 6 percentage points.

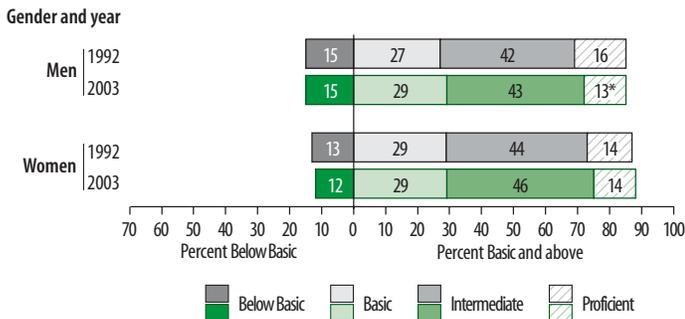
The percentage of women with *Below Basic* document literacy also decreased, from

14 percent in 1992 to 11 percent in 2003 (figure 6).

Despite the overall gain made by women in quantitative literacy, in 2003, the percentage of men with *Proficient* quantitative literacy was 5 percent-

age points higher than the percentage of women (figure 7). For the prose and document scales, there were no significant differences between the percentage of men and women with *Proficient* literacy (figures 5 and 6).

**Figure 5. Percentage of adults in each prose literacy level, by gender: 1992 and 2003**

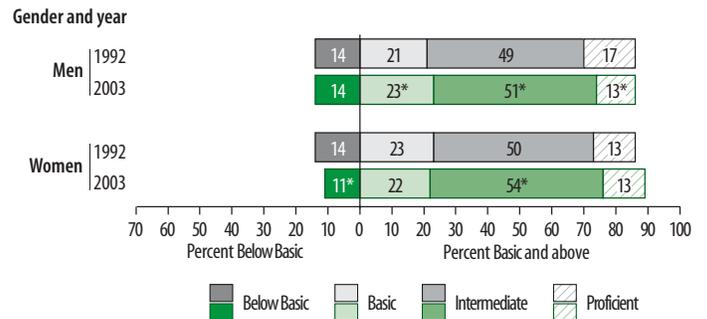


\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

**Figure 6. Percentage of adults in each document literacy level, by gender: 1992 and 2003**

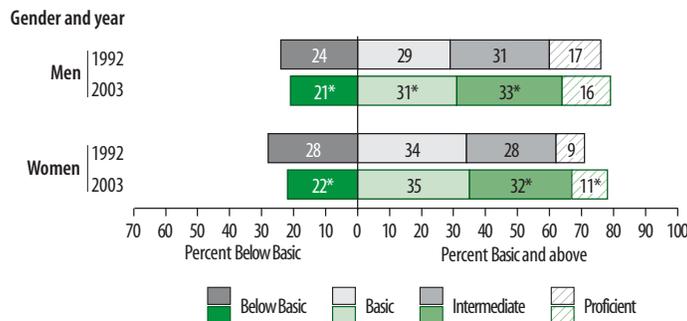


\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

**Figure 7. Percentage of adults in each quantitative literacy level, by gender: 1992 and 2003**



\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

## Literacy by Race/Ethnicity

The percentage of Whites, Blacks, and Asians/Pacific

### NAAL Population, 1992 and 2003

**Table 3. Percentage of adults, by race/ethnicity: 1992 and 2003**

Race/ethnicity	1992	2003
White	77	70*
Black	11	12
Hispanic	8	12*
Asian/Pacific Islander	2	4*

\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this table. In 1992, respondents were allowed to identify only one race. In 2003, respondents were allowed to identify multiple races and are not included in the White, Black, or Asian/Pacific Islander categories in this table. All adults of Hispanic origin are classified as Hispanic, regardless of race. The Asian/Pacific Islander category includes Native Hawaiians.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

The percentage of Whites decreased between 1992 and 2003, while the percentage of Hispanics and Asians/Pacific Islanders increased. The percentage of Hispanics rose 4 percentage points and the percentage of Asians/Pacific Islanders increased 2 percentage points. The percentage of Blacks did not differ significantly between 1992 and 2003.

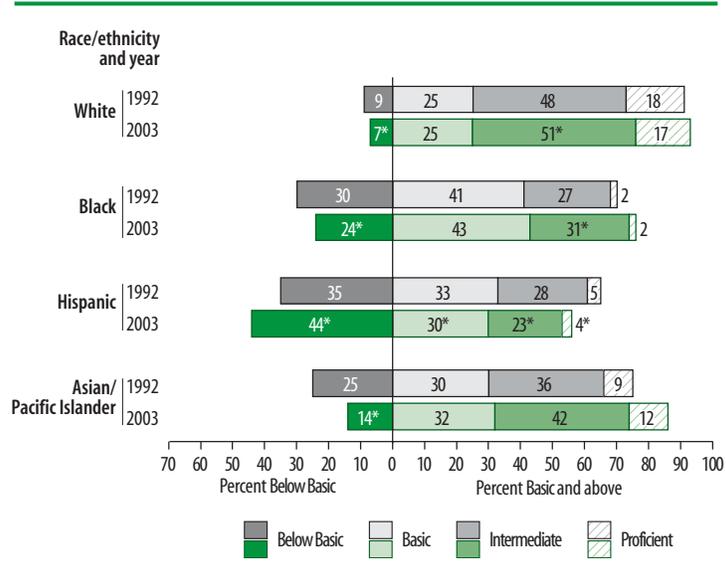
Islanders with *Below Basic* literacy decreased between 1992 and 2003 on the prose, document, and quantitative scales (figures 8, 9, and 10). Among Hispanics, the percentage with *Below Basic*

prose literacy increased 9 percentage points between 1992 and 2003, while the percentage with *Below Basic* document literacy increased 8 percentage points (figures 8 and 9). The percentage of

Hispanics with *Below Basic* quantitative literacy was 50 percent in both 1992 and 2003 (figure 10).

Although the percentage of Hispanics with *Below Basic*

**Figure 8. Percentage of adults in each prose literacy level, by race/ethnicity: 1992 and 2003**



\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure. In 1992, respondents were allowed to identify only one race. In 2003, respondents were allowed to identify multiple races and are not included in the White, Black, or Asian/Pacific Islander categories in this figure. All adults of Hispanic origin are classified as Hispanic, regardless of race. The Asian/Pacific Islander category includes Native Hawaiians.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

document literacy increased between 1992 and 2003, the percentage of Hispanics with *Below Basic* document literacy was lower than the percentage of Hispanics with *Below Basic* prose or quanti-

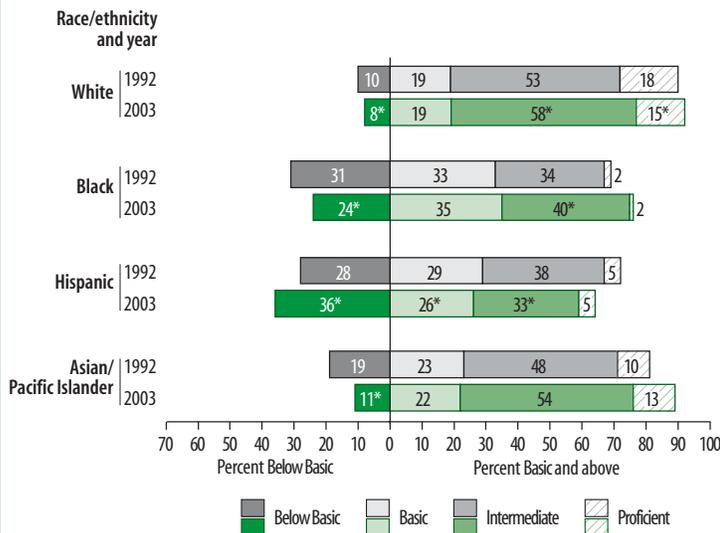
tative literacy (figures 8, 9, and 10).

For prose, document, and quantitative literacy in 2003, the percentage of Whites and Asians/Pacific Islanders with

*Proficient* literacy was significantly higher than the percentage of Blacks and Hispanics (figures 8, 9, and 10). A higher percentage of Whites than Asians/Pacific Islanders had *Proficient* prose

literacy (figure 8). On all three scales, Hispanics were more likely than Blacks to have *Proficient* literacy (figures 8, 9, and 10).

**Figure 9. Percentage of adults in each document literacy level, by race/ethnicity: 1992 and 2003**

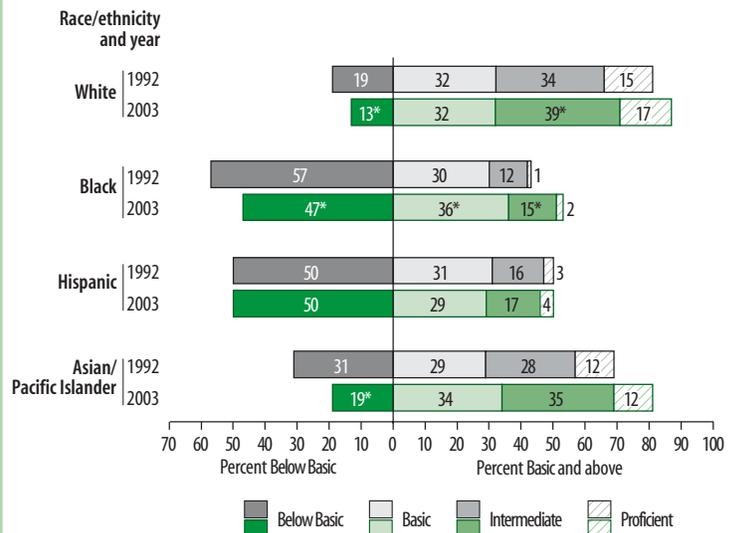


\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure. In 1992, respondents were allowed to identify only one race. In 2003, respondents were allowed to identify multiple races. In 2003, 2 percent of respondents identified multiple races and are not included in the White, Black, or Asian/Pacific Islander categories in this figure. All adults of Hispanic origin are classified as Hispanic, regardless of race. The Asian/Pacific Islander category includes Native Hawaiians.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

**Figure 10. Percentage of adults in each quantitative literacy level, by race/ethnicity: 1992 and 2003**



\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure. In 1992, respondents were allowed to identify only one race. In 2003, respondents were allowed to identify multiple races. In 2003, 2 percent of respondents identified multiple races and are not included in the White, Black, or Asian/Pacific Islander categories in this figure. All adults of Hispanic origin are classified as Hispanic, regardless of race. The Asian/Pacific Islander category includes Native Hawaiians.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

## Literacy by Age

The average prose, document, and quantitative literacy of adults in the oldest age groups (50 to 64 and 65 and older) increased between 1992 and 2003 (figure 11). For the same

groups of adults, the percentage with *Below Basic* literacy fell across the literacy scales (figures 12 and 13; results for the quantitative scale are not shown here but are available on the NAAL website).

Although the average literacy of adults age 65 and older increased between 1992 and 2003, adults in this age group had the lowest average literacy in 2003 and accounted for the largest percentage of adults with *Below Basic* prose,

document, and quantitative literacy in 2003 (figures 11, 12, and 13; quantitative levels not shown). Among adults age 65 and older, 23 percent had *Below Basic* prose literacy, 27 percent had *Below Basic* document literacy, and

### NAAL Population, 1992 and 2003

**Table 4. Percentage of adults, by age groups: 1992 and 2003**

Age	1992	2003
16–18	6	6
19–24	13	11*
25–39	33	28*
40–49	17	20*
50–64	16	21*
65+	15	15

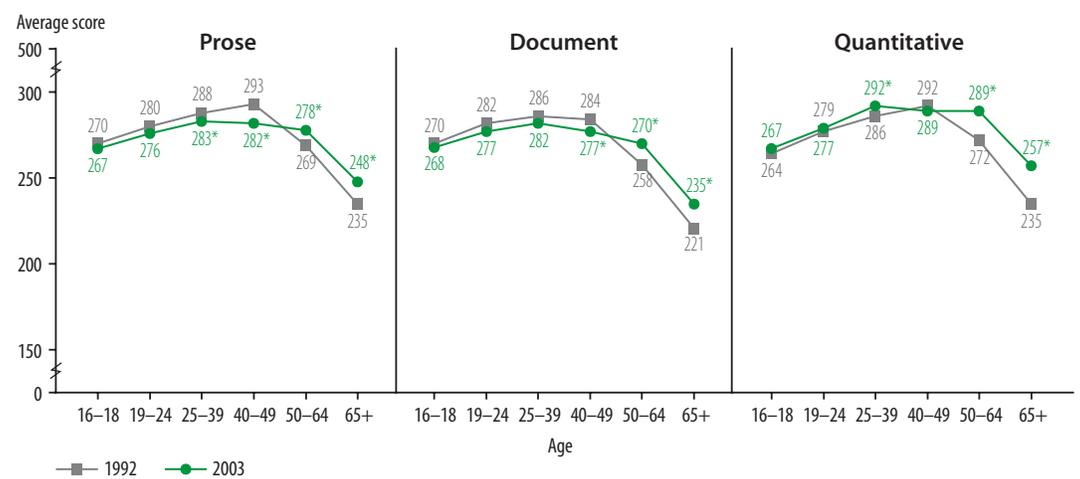
\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this table.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

The aging of America's adults is reflected in the increase in the percentage of adults between the ages of 40 and 49 and between the ages of 50 and 64. While the percentage of adults in these age groups rose between 1992 and 2003, the percentage of adults between the ages of 19 and 24 and between 25 and 39 decreased.

**Figure 11. Average prose, document, and quantitative literacy scores of adults, by age: 1992 and 2003**



\* Significantly different from 1992.

NOTE: Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

34 percent had *Below Basic* quantitative literacy.

Average prose literacy scores for adults in the 25 to 39 and 40 to 49 age groups fell from 1992 to 2003 (figure 11).

Average document literacy

decreased for adults ages 40 to 49, while the average quantitative literacy of adults ages 25 to 39 increased.

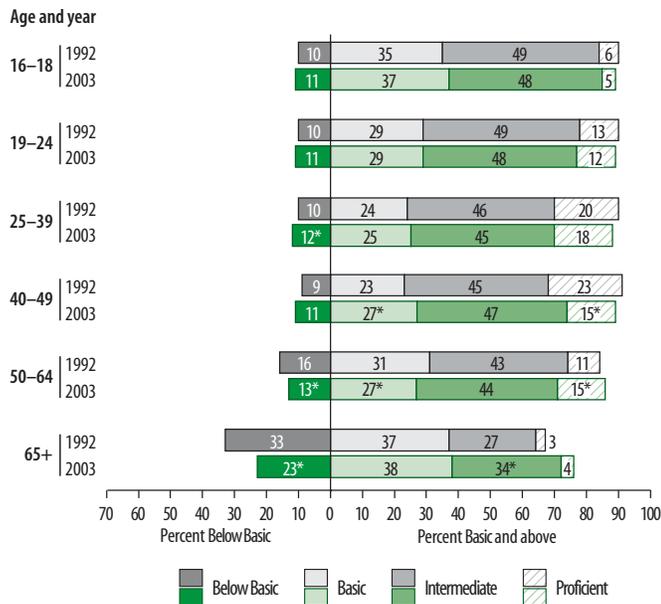
Average literacy for adults in the 16 to 18 and 19 to 24 age groups was not significantly different in 1992 and

2003 across the literacy scales (figure 11).

Among adults ages 50 to 64, the percentage with *Proficient* prose, document, and quantitative literacy increased between 1992 and 2003

(figures 12 and 13; quantitative data not shown). The percentage of adults age 65 and older with *Proficient* literacy did not change on any of the three scales between 1992 and 2003.

**Figure 12. Percentage of adults in each prose literacy level, by age: 1992 and 2003**

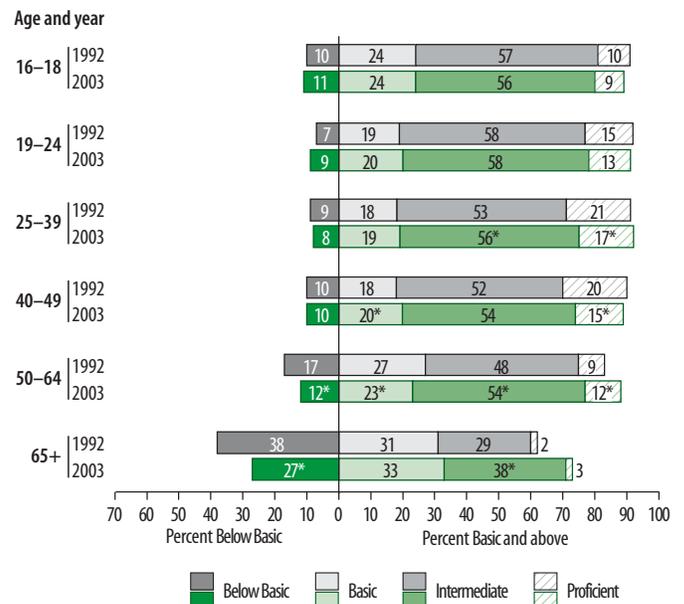


\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

**Figure 13. Percentage of adults in each document literacy level, by age: 1992 and 2003**



\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

## Literacy by Language Spoken Before Starting School

### NAAL Population, 1992 and 2003

**Table 5. Percentage of adults, by language spoken before starting school: 1992 and 2003**

Language spoken before starting school	1992	2003
English only	86	81*
English and Spanish	2	2
English and other language	3	4
Spanish	5	8*
Other language	4	5

\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this table. The English and Spanish category includes adults who spoke only English and Spanish, as well as adults who spoke English, Spanish, and another non-English language. The Spanish category includes adults who spoke only Spanish, as well as adults who spoke Spanish and another non-English language. The Other language category includes only adults who did not speak English or Spanish.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

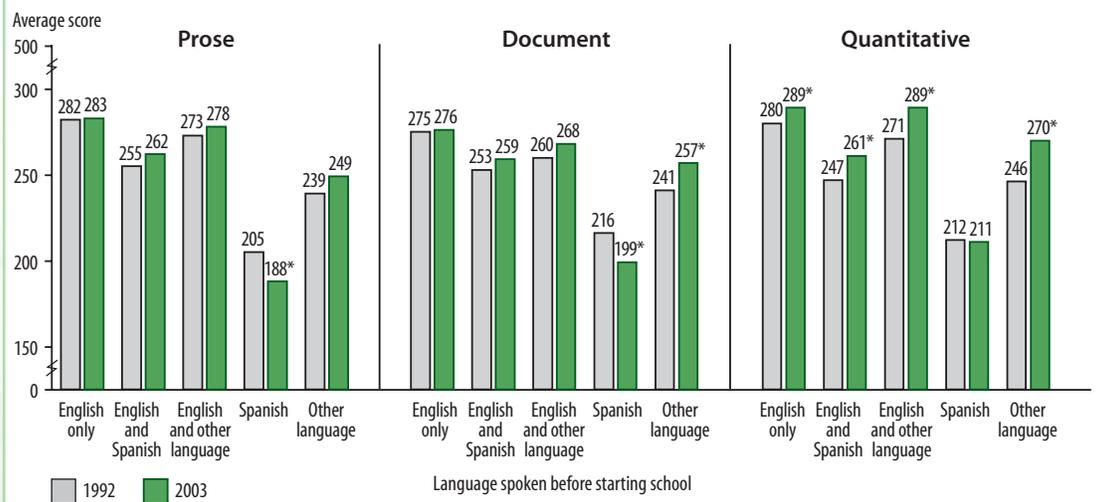
The language background of America's adults changed between 1992 and 2003. The percentage of adults who spoke English before starting school decreased, while the percentage of adults who spoke Spanish or Spanish and another non-English language before starting school increased.

Scores for adults who spoke Spanish or Spanish and another non-English language before starting school dropped 17 points from 1992 to 2003 for prose and document literacy but did not change significantly for quantitative literacy (figure 14). The average prose

and document literacy of adults who spoke English before starting school (English only, English and Spanish, English and other language) did not change significantly between 1992 and 2003, although their average quantitative literacy increased.

Fewer adults who spoke English only or English and a non-Spanish language before starting school had *Below Basic* prose, document, and quantitative literacy in 2003 than in 1992 (figures 15 and 16; results for the quantitative scale are not

**Figure 14. Average prose, document, and quantitative literacy scores of adults, by language spoken before starting school: 1992 and 2003**



\* Significantly different from 1992.

NOTE: Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure. The English and Spanish category includes adults who spoke only English and Spanish, as well as adults who spoke English, Spanish, and another non-English language. The Spanish category includes adults who spoke only Spanish, as well as adults who spoke Spanish and another non-English language. The Other language category includes only adults who did not speak English or Spanish.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

shown here but are available on the NAAL website). Among adults who spoke Spanish or Spanish and another non-English language before starting school, the percentage with *Below Basic* prose and document literacy increased between

1992 and 2003 (figures 15 and 16).

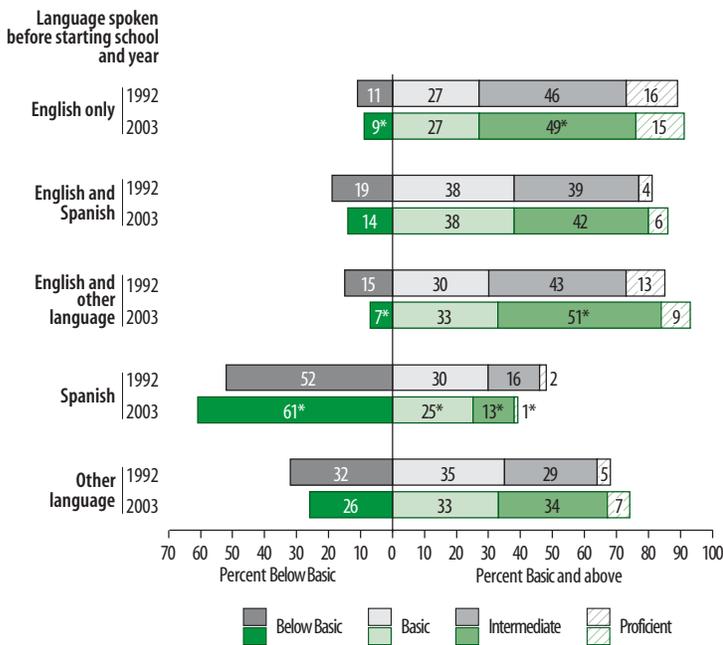
Average document literacy in 2003 was highest for the English-language-only group (figure 14). Prose and quantitative literacy did not differ significantly between the

English-language-only and the English and other language groups.

In 2003, among adults who spoke Spanish or Spanish and another non-English language before starting school, 61 percent had *Below Basic* prose lit-

eracy, 49 percent had *Below Basic* document literacy, and 62 percent had *Below Basic* quantitative literacy (figures 15 and 16; quantitative data not shown).

**Figure 15. Percentage of adults in each prose literacy level, by language spoken before starting school: 1992 and 2003**

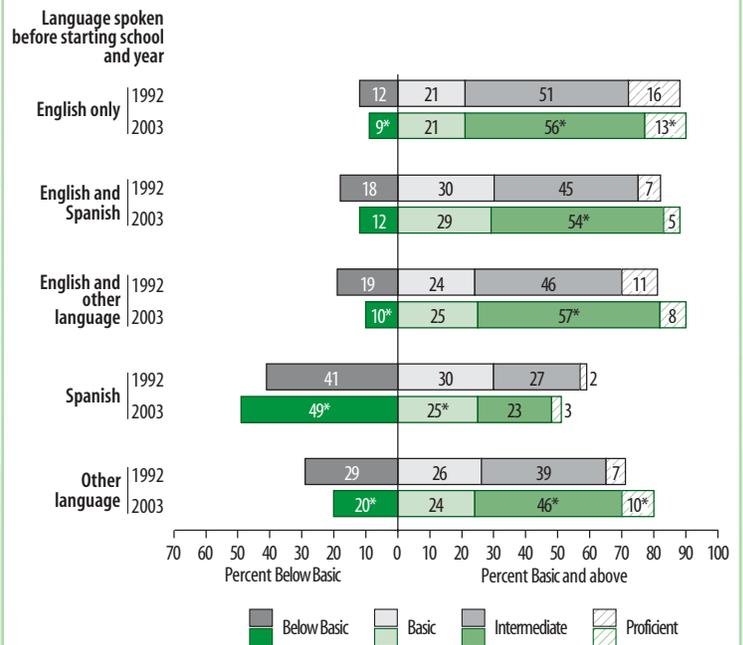


\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure. The English and Spanish category includes adults who spoke only English and Spanish, as well as adults who spoke English, Spanish, and another non-English language. The Spanish category includes adults who spoke only Spanish, as well as adults who spoke Spanish and another non-English language. The Other language category includes only adults who did not speak English or Spanish.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

**Figure 16. Percentage of adults in each document literacy level, by language spoken before starting school: 1992 and 2003**



\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure. The English and Spanish category includes adults who spoke only English and Spanish, as well as adults who spoke English, Spanish, and another non-English language. The Spanish category includes adults who spoke only Spanish, as well as adults who spoke Spanish and another non-English language. The Other language category includes only adults who did not speak English or Spanish.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

## Literacy by Educational Attainment

Average prose literacy decreased for all levels of educational attainment between 1992 and 2003, with the

exception of adults who were still in high school or completed a GED (table 7).

Average document literacy also decreased among adults who completed education above a vocational, trade, or business school. Differences in document literacy in 1992 and 2003 were not significant

for adults with educational attainment less than some college. There were no significant differences in average quantitative literacy between 1992 and 2003 for any educational attainment level.

In 2003, literacy was lowest across the three scales for

adults who did not complete high school; these adults also accounted for the largest group with *Below Basic* prose, document, and quantitative literacy (tables 7 and 8). On the quantitative scale, for example, over 60 percent of adults without a high school degree had *Below Basic* literacy.

### NAAL Population, 1992 and 2003

**Table 6. Percentage of adults, by educational attainment: 1992 and 2003**

Educational attainment	1992	2003
Still in high school	4	3*
Less than/some high school	21	15*
GED/high school equivalency	4	5*
High school graduate	27	26*
Vocational/trade/business school	5	6
Some college	9	11*
Associate's/2-year degree	11	12*
College graduate	10	12*
Graduate studies/degree	9	11*

\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this table.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

The educational attainment of America's adults increased between 1992 and 2003. The percentage of adults with less than a high school degree or GED/Equivalency decreased by 6 percentage points, while more adults completed an associate's degree or more education.

**Table 7. Average prose, document, and quantitative literacy scores of adults, by educational attainment: 1992 and 2003**

Literacy scale and educational attainment	1992	2003
<b>Prose</b>		
Still in high school	268	262
Less than/some high school	216	207*
GED/high school equivalency	265	260
High school graduate	268	262*
Vocational/trade/business school	278	268*
Some college	292	287*
Associate's/2-year degree	306	298*
College graduate	325	314*
Graduate studies/degree	340	327*
<b>Document</b>		
Still in high school	270	265
Less than/some high school	211	208
GED/high school equivalency	259	257
High school graduate	261	258
Vocational/trade/business school	273	267
Some college	288	280*
Associate's/2-year degree	301	291*
College graduate	317	303*
Graduate studies/degree	328	311*
<b>Quantitative</b>		
Still in high school	263	261
Less than/some high school	209	211
GED/high school equivalency	265	265
High school graduate	267	269
Vocational/trade/business school	280	279
Some college	295	294
Associate's/2-year degree	305	305
College graduate	324	323
Graduate studies/degree	336	332

\* Significantly different from 1992.

NOTE: Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this table.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

In 2003, prose, document, and quantitative literacy rose with successive levels of educational attainment beginning with the completion of high school (table 7). Average prose, document, and quantitative literacy for adults who completed a GED was not significantly different from that of adults

who stopped their education after graduating high school.

The declining performance of adults with higher educational attainment was reflected in the decrease between 1992 and 2003 in the percentage of adults with postsecondary degrees with *Proficient* prose

and document literacy (table 8). On the prose scale, the percentage of college graduates with *Proficient* literacy decreased from 40 percent in 1992 to 31 percent in 2003. For adults who took graduate classes or completed a graduate degree, the percentage with *Proficient* prose literacy

fell 10 percentage points between 1992 and 2003.

The distribution of adults across the four literacy levels on the quantitative scale did not change significantly between 1992 and 2003 within any of the educational attainment categories.

**Table 8. Percentage of adults in each prose, document, and quantitative literacy level, by educational attainment: 1992 and 2003**

Literacy scale and educational attainment	<i>Below Basic</i>		<i>Basic</i>		<i>Intermediate</i>		<i>Proficient</i>	
	1992	2003	1992	2003	1992	2003	1992	2003
<b>Prose</b>								
Still in high school	11	14	36	37	47	45	6	4
Less than/some high school	45	50*	38	33*	17	16	1	1
GED/high school equivalency	9	10	42	45	46	43	3	3
High school graduate	11	13	37	39	48	44*	5	4
Vocational/trade/business school	9	10	29	36*	53	49	9	5*
Some college	4	5	23	25	59	59	14	11
Associate's/2-year degree	2	4*	16	20*	58	56	23	19
College graduate	2	3	10	14*	49	53	40	31*
Graduate studies/degree	1	1	6	10*	43	48	51	41*
<b>Document</b>								
Still in high school	10	13	24	24	57	54	9	9
Less than/some high school	44	45	32	29*	23	25	1	2
GED/high school equivalency	9	13	31	30	58	53	3	4
High school graduate	12	13	28	29	54	52	6	5
Vocational/trade/business school	8	9	22	26	60	59	10	7
Some college	4	5	15	19*	67	65	14	10
Associate's/2-year degree	3	3	12	15	60	66*	25	16*
College graduate	2	2	9	11	52	62*	37	25*
Graduate studies/degree	1	1	5	9*	48	59*	45	31*
<b>Quantitative</b>								
Still in high school	31	31	37	38	27	25	6	5
Less than/some high school	65	64	25	25	9	10	1	1
GED/high school equivalency	25	26	46	43	26	28	3	3
High school graduate	26	24	41	42	29	29	5	5
Vocational/trade/business school	18	18	39	41	35	35	8	6
Some college	11	10	34	36	42	43	13	11
Associate's/2-year degree	8	7	29	30	45	45	18	18
College graduate	5	4	21	22	44	43	31	31
Graduate studies/degree	2	3	15	18	43	43	39	36

\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this table.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

## Literacy by Employment Status

The ability to complete different literacy tasks may influence employability, so it is useful to look at the distribution of adults by literacy levels across the four categories of employment. Among adults with *Below Basic* prose literacy, 51 percent were not in the labor force in 2003, while 35

percent were employed full time (figure 17; results for the document and quantitative scales are not shown here but are available on the NAAL website).

The percentage of adults with *Below Basic* prose literacy who were employed full

time increased 6 percentage points between 1992 and 2003, and the percentage with *Below Basic* document literacy who were employed full time increased 5 percentage points (figure 17; document and quantitative results not shown). For adults with *Basic* prose literacy, 38 per-

cent were not in the labor force and 6 percent were unemployed.

Sixty-four percent of adults with *Proficient* prose literacy and 54 percent of adults with *Intermediate* prose literacy were employed full time (figure 17). Eighteen percent

### NAAL Population, 1992 and 2003

**Table 9. Percentage of adults, by employment status: 1992 and 2003**

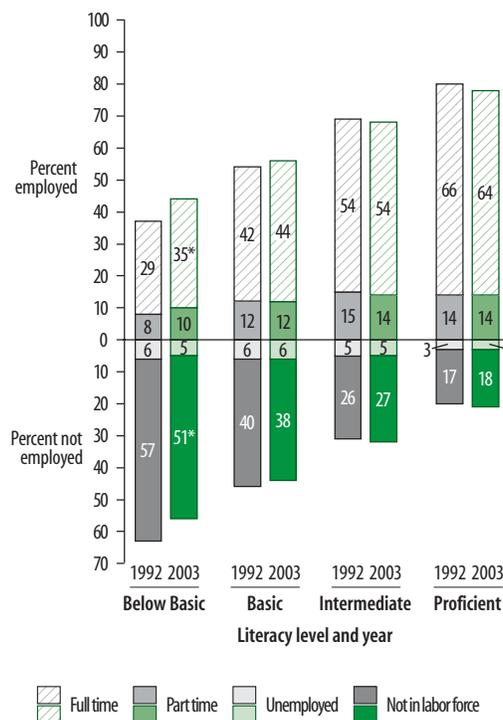
Employment status	1992	2003
Full time	49	50
Part time	13	13
Unemployed	5	5
Not in labor force	33	32

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age or older living in households. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this table.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

The employment status of America's adults did not change significantly between 1992 and 2003. Over 60 percent of all adults were employed either full or part time.

**Figure 17. Percentage of adults in each employment category, by prose literacy level: 1992 and 2003**



\* Significantly different from 1992.

NOTE: Detail may not sum to totals because of rounding. Adults are defined as people 16 years of age or older living in households. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

of adults with *Proficient* prose literacy and 27 percent of adults with *Intermediate* prose literacy were not in the labor force; 3 percent of adults with *Proficient* prose literacy and 5 percent of adults with *Intermediate* prose literacy were unemployed.

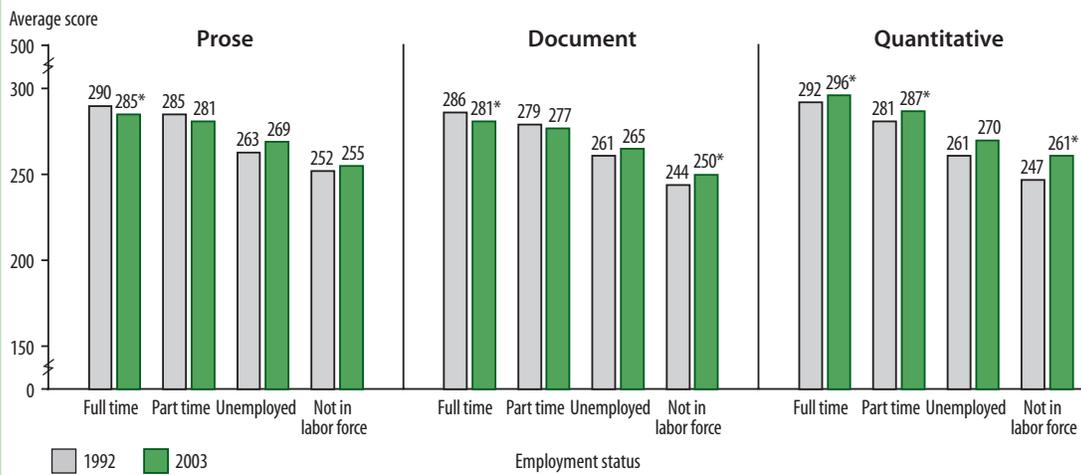
Among adults employed full time, average prose and document literacy scores decreased by 5 points between 1992 and 2003, while average quantitative scores rose by 4 points (figure 18). Average quantitative literacy also increased between 1992 and 2003 for adults employed part

time and those not in the labor force.

In 2003, average prose and document literacy was highest among adults employed full or part time (the differences between these groups were not statistically significant), and average quantita-

tive literacy was highest for adults employed full time (figure 18). Literacy was lowest across the three scales for adults who were not in the labor force.

**Figure 18. Average prose, document, and quantitative literacy scores of adults, by employment status: 1992 and 2003**



\* Significantly different from 1992.

NOTE: Adults are defined as people 16 years of age or older living in households. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

## Population and Sample Size, and Data Collection Procedures

The 2003 assessment was administered to a nationally representative sample of 19,714 adults ages 16 and older residing in households or prisons.

A smaller number of respondents (1,173) were selected for the prison sample and were interviewed in the facilities where they were incarcerated. Sampled adults residing in households, but temporarily in jail—where the median stay is about two weeks—would have been interviewed at some other time during the ten month period of data collection.

The household sample is representative of the 221,020,000 adults in households, while the prison sample is representative of the 1,380,000 adults

in prisons in 2003.

Data collection for the household sample was conducted between May 2003 and February 2004 and for the prison sample between March 2004 and July 2004. The household and prison samples were combined to create a national sample representative of the 222,400,000 American adults in households or prisons.

Administration procedures for the 2003 assessment were changed to provide more accurate data about English literacy levels of adults. One change was designed to increase the number of Spanish speaking adults who could participate in the study. In 1992, the easy literacy tasks at the beginning of the assess-

ment were presented in English only. In 2003, the corresponding tasks were presented in either English or Spanish, although the materials to be read were presented only in English. As a result, fewer adults had to be excluded due to the language of the interview.

A second change was designed to make the assessment more like the demands of everyday life. In 1992, respondents were not allowed to use a calculator for most quantitative literacy questions. In 2003, respondents had access to a calculator. Allowing respondents to use calculators is consistent with the assessment's functional definition of literacy. Both of these changes require some caution in interpreting the

changes in literacy levels from 1992 to 2003, but result in the ability of the 2003 assessment to provide more accurate data about the English literacy levels of adults.

The final household sample response rate was 62 percent and the final prison sample response rate was 88 percent. NCES statistical standards require a nonresponse bias analysis when the unit response rate for a sample is less than 85 percent. The nonresponse bias analysis of the household sample revealed differences in the background characteristics of respondents who participated in the assessment compared to those who refused. Detailed information about the nonresponse bias analysis is available on the NAAL website.

### Variable Definitions

Definitions of all population groups presented in this report are available on the NAAL website. Literacy results for adults who indicated they were American Indian/Alaska Native or Multiracial/Other are not reported separately but are included in the total population literacy estimates.

Comparisons between 1992 and 2003 for multiracial adults are not possible because respondents were allowed to identify only one race in 1992. In 2003, about 2 per-

cent of respondents identified multiple races. Due to small sample sizes, the Multiracial and Other categories were combined. Results for Multiracial/Other and American Indian/Alaska Native adults, as well as results by Hispanic origin, will be included in future NAAL reports.

All respondents were asked to report their birth dates, and this information was used to calculate their age. Age groups reported are 16 to 18, 19 to 24, 25 to 39, 40 to 49, 50 to 64, and

65 and older. Age groups were selected to correspond to the key life stages of many adults (though not all adults enter the stages at the ages specified):

- 16 to 18: Completion of secondary education
- 19 to 24: College or job training
- 25 to 39: Early career
- 40 to 49: Mid career
- 50 to 64: Late career
- 65 and older: Retirement

A nonresponse bias adjustment was performed to reduce the bias due to respondent refusal. The adjustment corrected for the initial nonresponse bias, resulting in negligible bias for the household sample. The adjustment procedures are discussed in detail in the forthcoming 2003 NAAL Technical Report. The analyses presented in this report are based on data from the corrected household sample and the prison sample.