



Highlights
From the 2003



Massachusetts



State Assessment of Adult Literacy





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Introduction

This report summarizes key findings from the 2003 Massachusetts State Assessment of Adult Literacy (SAAL). Administered in Massachusetts in 2003 and early 2004, the assessment measures the prose, document, and quantitative literacy of Massachusetts's adults. The Massachusetts SAAL was conducted in conjunction with the National Assessment of Adult Literacy (NAAL), a national literacy assessment sponsored by the National Center for Education Statistics of the United States Department of Education.

This introduction provides an overview of the 2003 Massachusetts SAAL, including the relationship between NAAL and SAAL, the definition of literacy used by SAAL and NAAL, a description of the literacy levels used in the report, and the design of the SAAL assessment. The following section compares the literacy of adults in Massachusetts with the literacy of adults in the nation across six important background characteristics: race/ethnicity, gender, age, language spoken before starting school, educational attainment, and employment status. A subsequent Massachusetts SAAL report will explore the literacy of Massachusetts's adults across workplace, family, and community settings, as well as health literacy.

Relationship Between NAAL and SAAL

The National Assessment of Adult Literacy (NAAL) measures the English literacy of America's adults for the first time since the 1992 National Adult Literacy Survey. The NAAL was administered to a representative sample of adults age 16 and older residing in households or prisons in 2003 and early 2004. Prior to the administration of the NAAL, all states were invited to participate in the 2003 State Assessment of Adult Literacy (SAAL). Just as the NAAL was designed to provide literacy estimates of the national population, the SAAL was designed to provide literacy estimates of state populations.

Massachusetts, along with Kentucky, Maryland, Missouri, New York, and Oklahoma, elected to participate in the 2003 SAAL. A sample of Massachusetts adults was

selected for the Massachusetts literacy assessment, which was administered concurrently with the national assessment.¹ Massachusetts adults selected for the SAAL took the same assessment as adults selected for the national sample (described below). The sole difference between the NAAL and the Massachusetts SAAL was that the Massachusetts sample was limited to adults residing in households, while the NAAL sampled adults in households or prisons. To allow appropriate comparisons between Massachusetts and the nation, the national literacy results presented in this report are based only on the national household sample.²

Although the NAAL is representative of the U.S. population and many population groups within the nation, it is not designed to provide state-level estimates of literacy. Only Massachusetts and the other five states that participated in the SAAL have literacy data that are representative of the adults in their states. These data provide a powerful tool for assessing the current literacy of Massachusetts's adults, as well as for making comparisons between Massachusetts and the nation.

Defining Literacy

The NAAL and SAAL define 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 table 1 for details):

- **Prose Literacy:** The knowledge and skills needed to perform prose tasks (i.e., to search, comprehend, and use information from continuous texts). Prose examples include editorials, news stories, brochures, and instructional materials.

¹ Adults from Massachusetts who were selected as part of the NAAL sample were added to the Massachusetts SAAL sample to increase the power of the analyses, resulting in a total sample size of 1,022 Massachusetts adults.

² Thus, the national results presented in this report are slightly different from the national results presented in the NAAL reports, which include both the household and prison samples.

- **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). Document examples include job applications, payroll forms, transportation schedules, maps, tables, and drug and food labels.
- **Quantitative Literacy:** The knowledge and skills required to perform quantitative literacy tasks (i.e., to identify and perform computations, either alone or sequentially, using numbers embedded in printed materials). Examples include balancing a checkbook, figuring out a tip, completing an order form, or determining from an advertisement the amount of interest on a loan.

Description of Literacy Levels

Literacy scores from the NAAL and SAAL are reported in two formats: (1) as averages and (2) as the percentage of adults within different literacy levels. The literacy levels divide adults into different groups on the basis of their performance on the assessment, providing a context for interpreting the literacy scores.

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 national assessment. The state assessments use the same literacy levels as the national study. Drawing on recommendations from BOTA's Committee on Performance Levels for Adults, NCES decided to report the assessment results using four literacy levels. Descriptions of the abilities associated with each level and the types of tasks that adults in the levels could complete are presented in table 1.

Assessment Design

Unlike indirect measures of literacy, which rely on self-reports or educational attainment, the NAAL and the SAAL measure literacy by asking respondents to demonstrate that

Table 1 Overview of the literacy levels

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

NOTE: Adults at the *Below Basic* level range from being unable to read and understand any written information in English to having the abilities listed and typically succeeding at the types of tasks listed. For each of the other levels, the abilities and tasks listed are typical of adults at that level. 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.

they understand the meaning of information found in texts they are asked to read. The literacy tasks in the assessments 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, and respondents wrote their answers directly in their assessment booklets.

A total of 152 prose, document, and quantitative literacy tasks were included in the NAAL and SAAL assessments. Asking each respondent to complete all the tasks would have been too time-consuming and tiring, so the tasks were organized into 13 unique blocks of tasks. Each block included approximately 11 literacy tasks distributed across the prose, document, and quantitative scales. Respondents were asked to complete an assessment booklet that included seven literacy screening tasks common to all booklets, followed by three blocks of tasks. Respondents who completed the assessment attempted approximately 40 literacy tasks in about 50 minutes.

Interpreting Results

The average scores and percentages presented in this report are estimates based on a sample of Massachusetts's adults.

Like all samples, the results are subject to a measure of uncertainty (i.e., sampling error), reflected in the standard errors of the estimates. Standard errors for the prose, document, and quantitative scale scores and the percentage of adults in each literacy level are presented in Appendix C.

The discussion of results in the following section takes into account the standard errors associated with the estimates. All differences discussed in this report, whether between Massachusetts and the nation or between members of a population group (e.g. men and women), are statistically significant at the .05 level. This means that observed differences between groups are unlikely to be due to chance factors associated with sampling variability. Hence, the term "significant" does not reflect any judgment about the absolute magnitude of differences.

Statistically significant differences between Massachusetts's adults and adults in the nation are noted in the tables and figures in this report. Differences between population groups are not identified in the tables or figures, but are discussed in the text. Although average scores are presented for each population group, space limitations prevented displaying results by literacy levels for all three scales. Full results for all literacy scales, with estimates and standard errors, can be found in Appendix C.



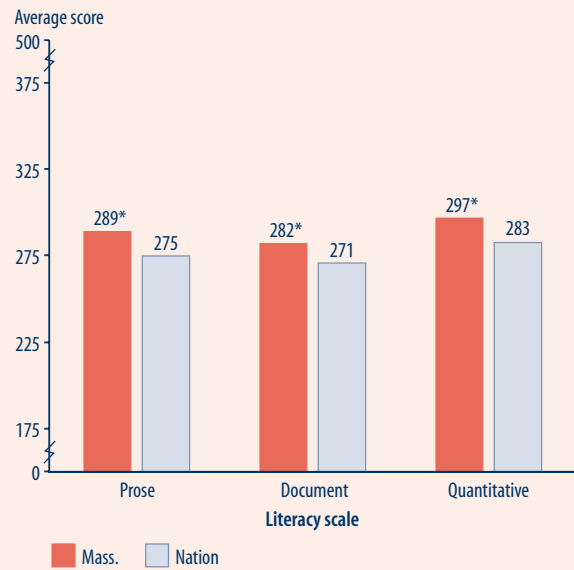
Adult Literacy in Massachusetts and the Nation, 2003

This section examines the relationship between important demographic characteristics, including education and employment, and literacy. Specifically, the analyses compare the literacy of adults in Massachusetts and the nation across different demographic groups, providing a glimpse of the state's relative performance on prose, document, and quantitative literacy.

Adult Literacy in Massachusetts Higher Than Adult Literacy in the Nation

The average prose, document, and quantitative literacy of adults in Massachusetts was significantly higher than the average literacy of the nation's adults. On the prose and quantitative scales, for example, scores for Massachusetts adults were 14 points higher than scores for adults in the nation. In addition, the percentage of adults in Massachusetts with *Below Basic* prose, document, and quantitative literacy was significantly lower than the percentage of adults in the nation with *Below Basic* literacy, while the percentage of Massachusetts adults with *Proficient* prose and quantitative literacy was significantly higher than the percentage of the adults in the nation with *Proficient* prose and quantitative literacy.

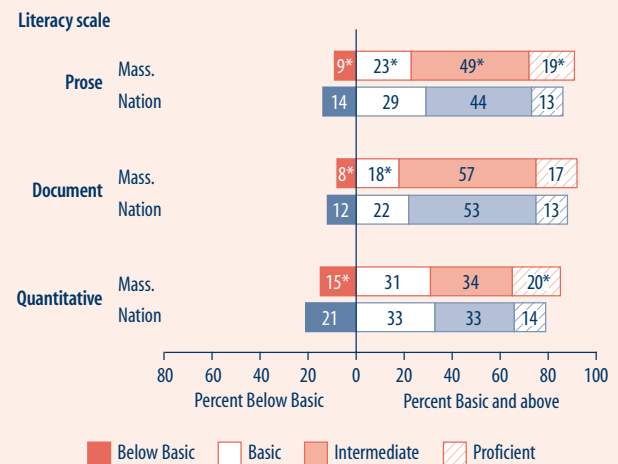
Figure 1. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation: 2003



* Significantly different from the nation.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Figure 2. Percentage of adults in Massachusetts and the nation in each prose, document, and quantitative literacy level: 2003



* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding.

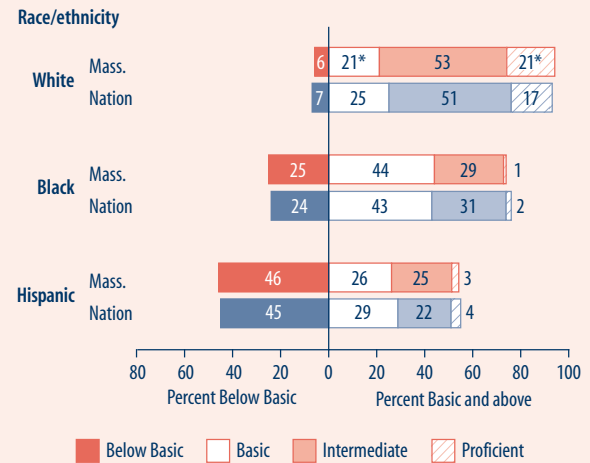
Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Average Literacy of Whites in Massachusetts Higher Than Literacy of Whites in the Nation

The average literacy of Whites in Massachusetts was significantly higher than the average literacy of Whites in the nation, though differences in the literacy of Blacks and Hispanics in Massachusetts and of Blacks and Hispanics in the nation were not significant (the literacy of Asians/Pacific Islanders in Massachusetts could not be estimated because of the small sample size). For the prose and quantitative scales, the percentage of Whites with *Proficient* literacy was higher in Massachusetts than that of Whites in the nation.

Similar to the nation, the average prose, document, and quantitative literacy of Whites in Massachusetts was higher than the average literacy of Blacks and Hispanics. The percentage of Whites with *Below Basic* literacy was also lower than the percentage of Blacks and Hispanics with *Below Basic* literacy. On the prose and document scales, over 40 percent of Hispanics in Massachusetts had *Below Basic* literacy, while over half of Hispanics in the state had *Below Basic* quantitative literacy.

Figure 4. Percentage of adults in Massachusetts and the nation in each prose literacy level, by race/ethnicity: 2003

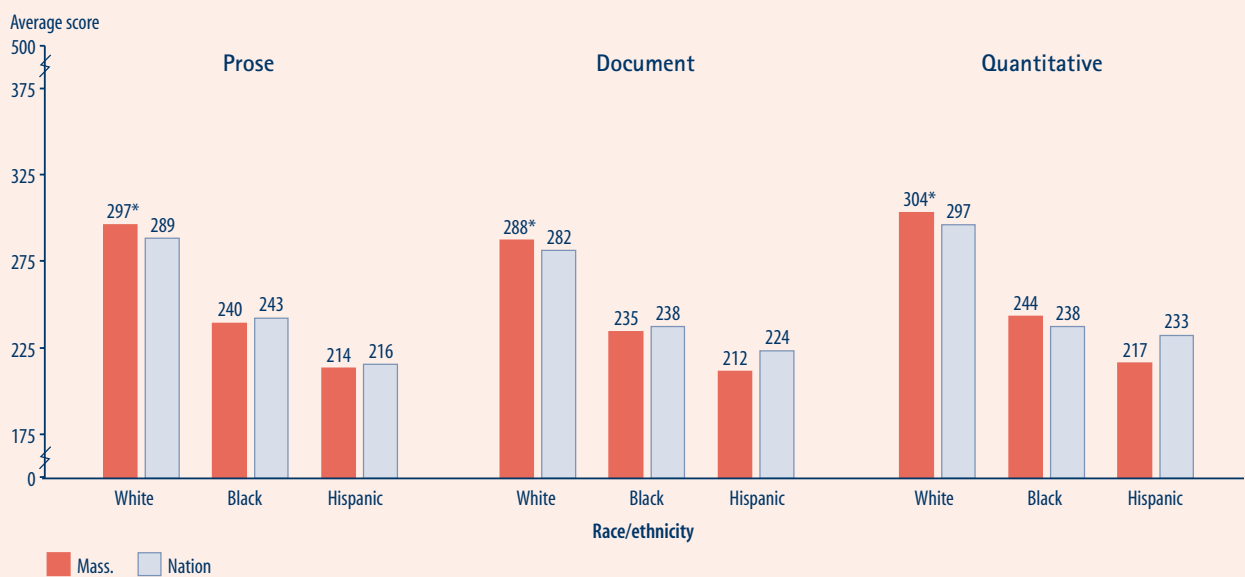


* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Figure 3. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation, by race/ethnicity: 2003



* Significantly different from the nation.

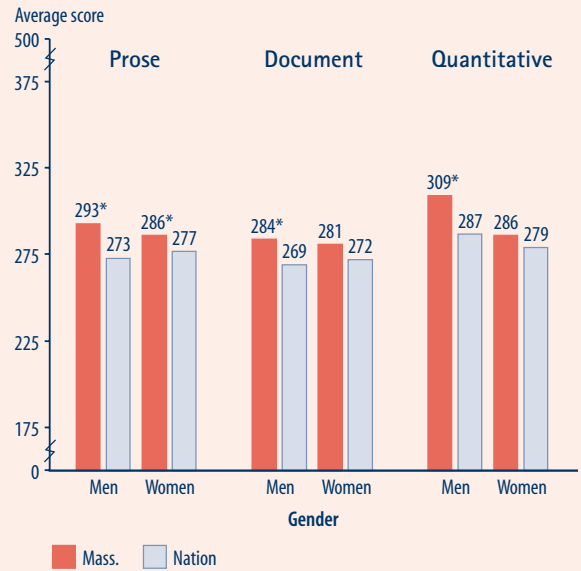
Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Average Literacy for Men in Massachusetts Higher Than for Men in the Nation

The average literacy of men in Massachusetts was significantly higher than the average literacy of men in the nation across the literacy scales. Among women, average prose literacy was higher in Massachusetts than in the nation. Differences between women in Massachusetts and women in the nation for the other two literacy scales were not significant.

Unlike the nation, the average prose literacy of women in Massachusetts was not significantly higher than the average prose literacy of men. However, similar to the nation, the gap in quantitative literacy between men and women remained in Massachusetts. Quantitative literacy scores for women were 23 points lower than for men in the state. The percentage of men in Massachusetts with *Proficient* quantitative literacy was also significantly higher than the percentage of women in the state with *Proficient* quantitative literacy.

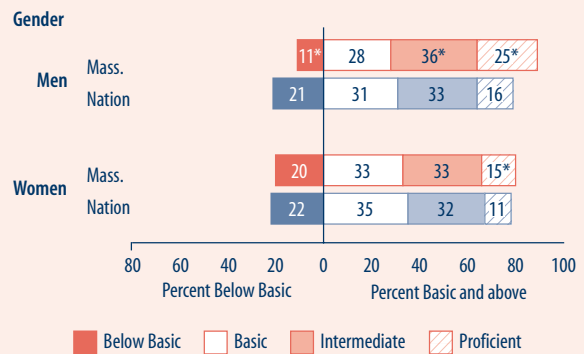
Figure 5. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation, by gender: 2003



* Significantly different from the nation.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Figure 6. Percentage of adults in Massachusetts and the nation in each quantitative literacy level, by gender: 2003



* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding.

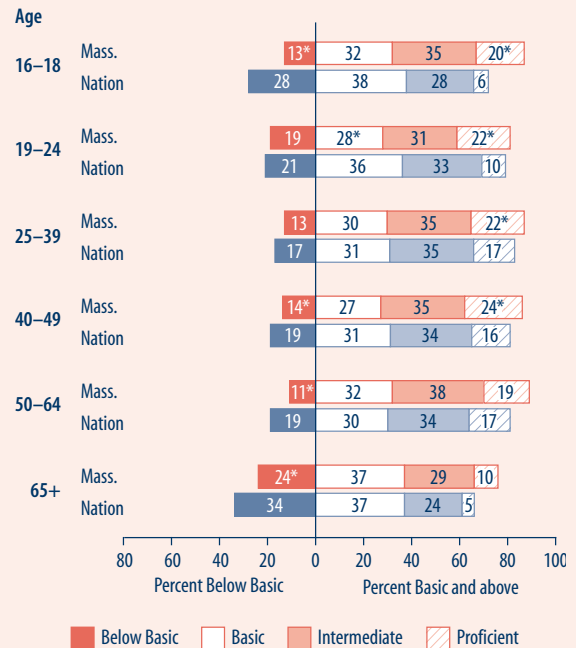
Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Average Document and Quantitative Literacy of the Youngest Adults Higher in Massachusetts Compared With the Nation

The average document and quantitative literacy of adults in the youngest age group, ages 16 to 18, was higher in Massachusetts than in the nation. In addition, the average prose, document, and quantitative literacy of adults age 65 and older in Massachusetts was significantly higher than the average literacy of adults in the same age group in the nation. Among the oldest adults, the percentage with *Proficient* prose literacy was also higher than in the nation.

Similar to the nation, the average document and quantitative literacy of adults age 65 and older in Massachusetts was significantly lower than the average document and quantitative literacy of any other age group in the state. Although lower than other age groups, the percentage of the oldest adults in Massachusetts with *Below Basic* document and quantitative literacy was significantly lower than the percentage of the oldest adults with *Below Basic* literacy in the nation. On the quantitative scale, approximately one-quarter of adults age 65 and older in Massachusetts had *Below Basic* quantitative literacy, compared with over one-third of older adults in the nation.

Figure 8. Percentage of adults in Massachusetts and the nation in each quantitative literacy level, by age: 2003

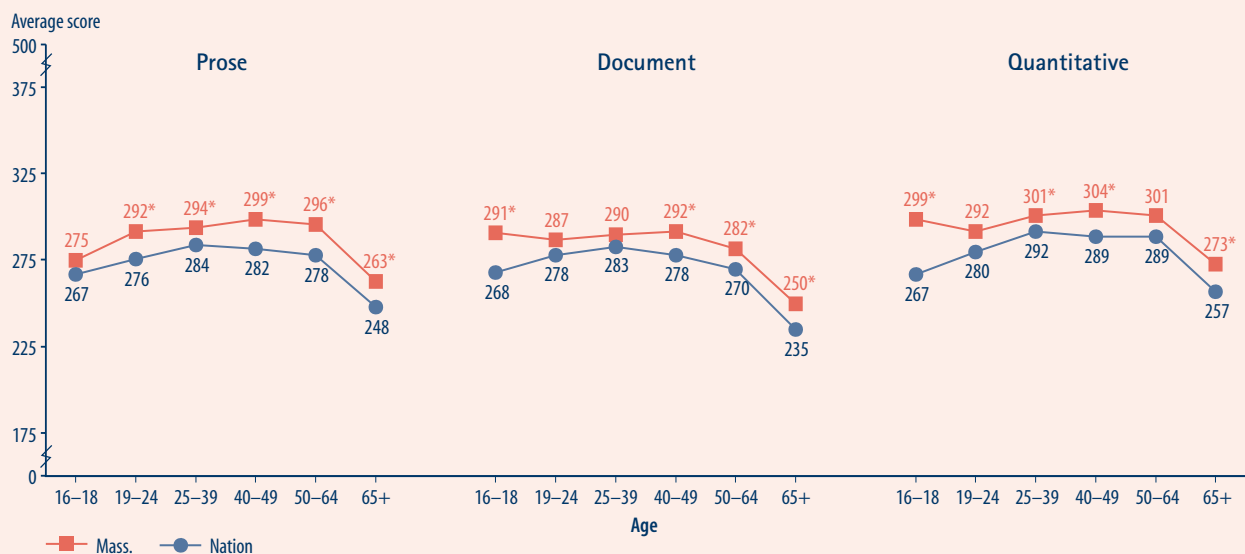


* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Figure 7. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation, by age: 2003



* Significantly different from the nation.

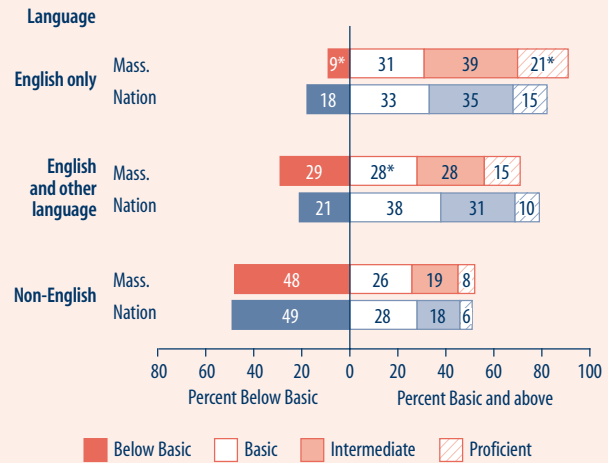
Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Average Literacy of Adults Who Spoke Only English Before Starting School Higher in Massachusetts Than in the Nation

The average literacy of adults in Massachusetts who spoke only English before starting school was significantly higher than the average literacy of adults from the same language background in the nation. Differences between adults in Massachusetts and the nation who spoke English and another language or a non-English language before starting school were not significant.

Similar to the nation, the average prose, document, and quantitative literacy of adults who spoke only English before starting school was higher than the average literacy of adults with a bilingual English language background or a non-English language background. The percentage of adults in Massachusetts with *Below Basic* literacy who spoke a non-English language before starting school was significantly higher than the percentage of adults with *Below Basic* literacy from the other two language groups. On the quantitative scale, for example, nearly half of the adults who spoke

Figure 10. Percentage of adults in Massachusetts and the nation in each quantitative literacy level, by language spoken before starting school: 2003



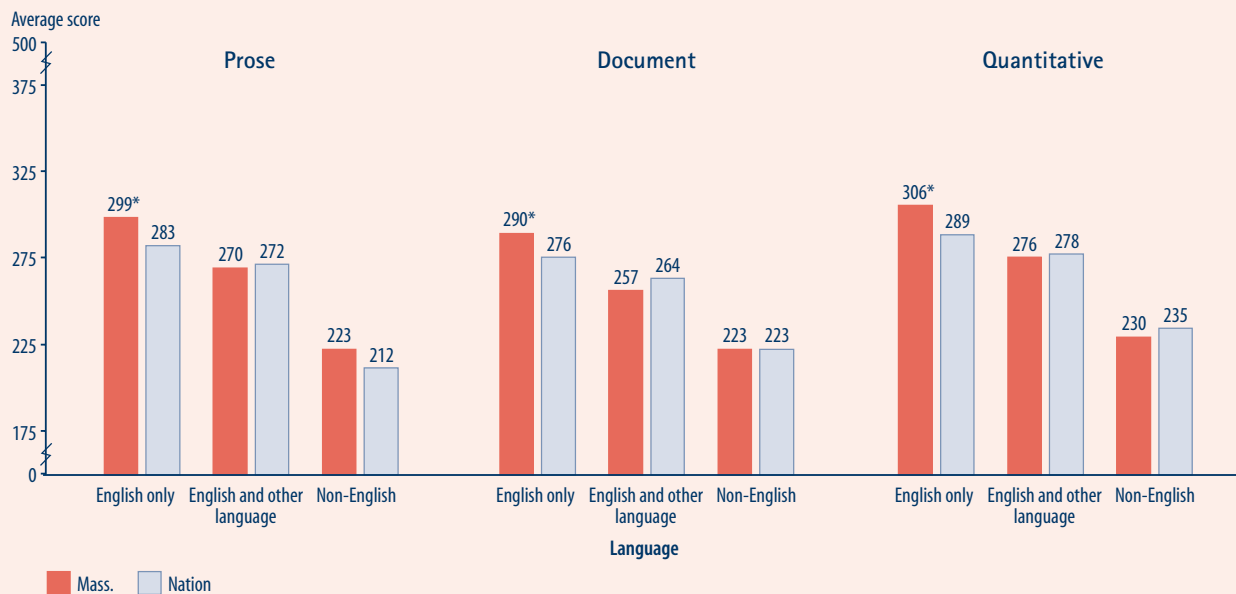
* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

a non-English language before starting school had *Below Basic* literacy.

Figure 9. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation, by language spoken before starting school: 2003



* Significantly different from the nation.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Average Prose Literacy of High School Graduates in Massachusetts Higher Than in the Nation

Adults in Massachusetts and the nation who completed more education had higher average literacy than adults with less education. Across the three scales, literacy was lowest for adults who did not complete high school and highest for adults who attended graduate school (differences in average document literacy for college graduates and adults who attended graduate school were not significant).

The prose literacy of adults in Massachusetts who stopped their education after high school graduation was significantly higher than adults with the same level of educational attainment in the nation (the literacy of adults in Massachusetts who completed their education after earning a GED could not be estimated because of the small sample size). Similar to adults in the nation, over half of Massachusetts adults with educational attainment less than a high school degree had *Below Basic* quantitative literacy, while over 40 percent had *Below Basic* prose and document literacy.

Table 1. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation, by educational attainment: 2003

| Educational attainment | Prose | | Document | | Quantitative | |
|----------------------------------|-------|--------|----------|--------|--------------|--------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| Less than/some high school | 207 | 206 | 214 | 208 | 216 | 211 |
| High school graduate | 272* | 262 | 268 | 258 | 275 | 269 |
| Vocational/trade/business school | 293* | 268 | 275 | 267 | 289 | 279 |
| Some college | 287 | 287 | 284 | 280 | 296 | 295 |
| Associate's/2-year degree | 303 | 298 | 283 | 291 | 308 | 305 |
| College graduate | 316 | 314 | 299 | 303 | 326 | 323 |
| Graduate studies/degree | 333 | 327 | 317 | 311 | 343 | 332 |

* Significantly different from the nation.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table 2. Percentage of adults in Massachusetts and the nation in each prose, document, and quantitative literacy level, by educational attainment: 2003

| Literacy scale and educational attainment | <i>Below Basic</i> | | <i>Basic</i> | | <i>Intermediate</i> | | <i>Proficient</i> | |
|---|--------------------|--------|--------------|--------|---------------------|--------|-------------------|--------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| Prose | | | | | | | | |
| Less than/some high school | 48 | 51 | 29 | 32 | 20 | 16 | 2 | 1 |
| High school graduate | 8 | 13 | 34 | 39 | 53 | 44 | 5 | 4 |
| Vocational/trade/business school | 1* | 10 | 20 | 36 | 69 | 49 | 10 | 5 |
| Some college | 8 | 5 | 23 | 25 | 54 | 59 | 15 | 12 |
| Associate's/2-year degree | 3 | 4 | 17 | 20 | 60 | 56 | 20 | 19 |
| College graduate | 2 | 3 | 15 | 14 | 50 | 53 | 33 | 31 |
| Graduate studies/degree | 2 | 1 | 6* | 10 | 48 | 48 | 46 | 41 |
| Document | | | | | | | | |
| Less than/some high school | 43 | 45 | 18* | 29 | 30 | 25 | 9* | 2 |
| High school graduate | 9 | 13 | 25 | 29 | 59 | 52 | 7 | 5 |
| Vocational/trade/business school | 6 | 9 | 24 | 26 | 61 | 59 | 10 | 7 |
| Some college | 5 | 5 | 15 | 19 | 68 | 65 | 13 | 11 |
| Associate's/2-year degree | 3 | 3 | 18 | 15 | 68 | 66 | 10 | 16 |
| College graduate | 3 | 2 | 13 | 11 | 62 | 62 | 23 | 25 |
| Graduate studies/degree | 1 | 1 | 7 | 9 | 56 | 59 | 36 | 31 |
| Quantitative | | | | | | | | |
| Less than/some high school | 55 | 64 | 26 | 25 | 13 | 10 | 6 | 1 |
| High school graduate | 20 | 24 | 44 | 42 | 31 | 29 | 6 | 5 |
| Vocational/trade/business school | 9 | 18 | 43 | 41 | 42 | 35 | 7 | 6 |
| Some college | 11 | 10 | 31 | 36 | 44 | 43 | 13 | 11 |
| Associate's/2-year degree | 8 | 7 | 28 | 30 | 44 | 45 | 20 | 18 |
| College graduate | 2 | 4 | 21 | 22 | 45 | 44 | 31 | 31 |
| Graduate studies/degree | 2 | 3 | 17 | 18 | 35 | 43 | 46 | 36 |

* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Average Literacy of Adults Employed Full Time in Massachusetts Higher Than in the Nation

The average prose, document, and quantitative literacy of adults employed full time in Massachusetts was significantly higher than the average literacy of adults employed full time in the nation. In addition, the average quantitative literacy of adults who were unemployed in Massachusetts was significantly higher than the quantitative literacy of similar adults in the nation.

On the prose and quantitative scales, the average literacy of Massachusetts adults employed full time was significantly higher than the literacy of adults in the state employed part time. Among adults with *Below Basic* quantitative literacy, the percentage employed full time in Massachusetts was less than in the nation. Across the literacy scales, the majority of Massachusetts adults with *Below Basic* literacy were not in the labor force.

Figure 12. Percentage of adults in Massachusetts and the nation in each employment category, by quantitative literacy level: 2003

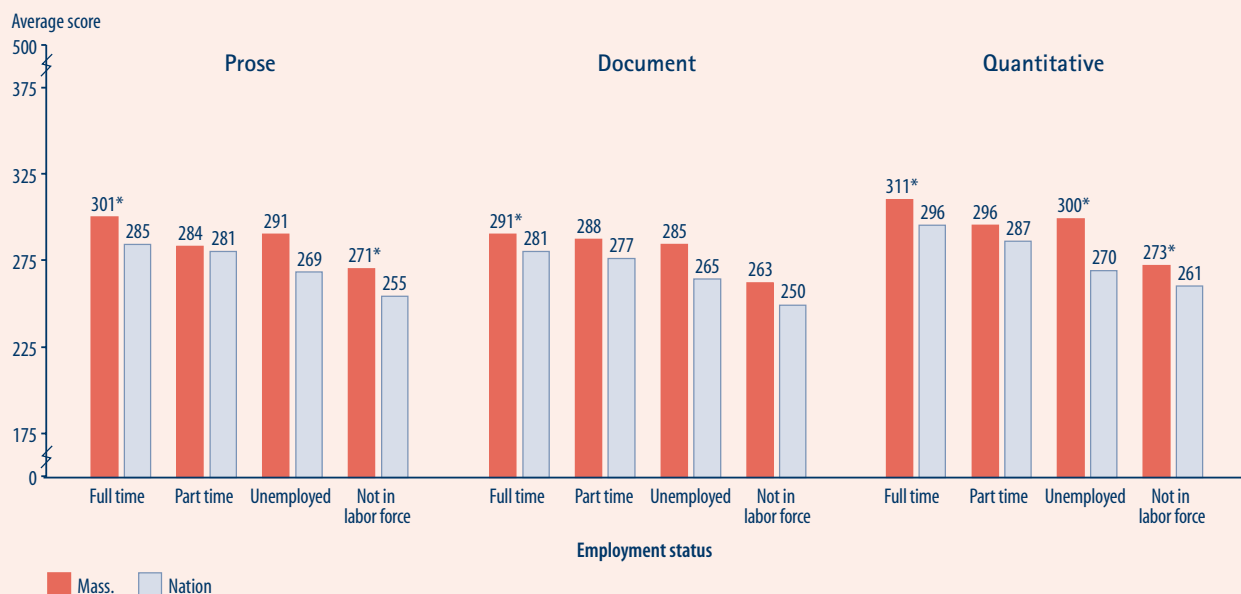


* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Figure 11. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation, by employment status: 2003



* Significantly different from the nation.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.



Appendix A: Technical Notes

This section provides an overview of key technical aspects of the Massachusetts SAAL, including sample size and data collection procedures, statistical testing, and the definition of variables used in this report. Further information about the design, administration, and analysis of the NAAL and SAAL can be found in the forthcoming *2003 National Assessment of Adult Literacy Technical Report*.¹

Sample Size and Data Collection Procedures

As noted in the Introduction, the Massachusetts State Assessment of Adult Literacy (SAAL) was administered concurrently with the National Assessment of Adult Literacy (NAAL). The 2003 NAAL was administered to a nationally representative sample of 19,714 adults ages 16 and older residing in households or prisons. In Massachusetts, 1,432 adults residing in households were originally sampled to participate in the Massachusetts SAAL. Valid assessment data were collected from 1,022 adults. This sample includes adults in the national NAAL sample, as well as adults selected specifically for the Massachusetts SAAL sample. Adults in Massachusetts who were selected as part of the NAAL sample were added to the Massachusetts SAAL sample to increase the power of the analyses. Data collection was conducted between May 2003 and February 2004.

The final household sample response rate for the NAAL and SAAL was 62 percent. The National Center for Education Statistics (NCES), which sponsored the NAAL, requires a nonresponse bias analysis when the unit response rate for a sample is less than 85 percent. The nonresponse bias analysis revealed differences in the background characteristics of respondents who participated in the assessment compared with those who refused. 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 analyses presented in this report are based on data from the corrected household sample.

¹ U.S. Department of Education, National Center for Education Statistics. (forthcoming). *2003 National Assessment of Adult Literacy Technical Report*. Washington, DC: U.S. Government Printing Office.

Statistical Testing

All comparisons discussed in this report are *statistical* comparisons based on the t statistic, using a 95 percent confidence interval (two-tailed). The formula used to compute the t statistic was

$$t = \frac{(P_1 - P_2)}{\sqrt{(SE_1^2 + SE_2^2)}}, \text{ where } P_1 \text{ and } P_2 \text{ are the estimates to be compared and } SE_1 \text{ and } SE_2 \text{ are their corresponding standard errors.}$$

Variable Definitions

Age

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 key life stages of adults, although stages will vary from person to person:

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

Educational Attainment

All respondents were asked to indicate the highest level of education they had completed in the United States. Respondents who went to school outside the United States were probed for the equivalent level of educational attainment. The following options were provided:

- Still in high school
- Less than high school
- Some high school
- GED or high school equivalency
- High school graduate
- Attended a vocational, trade, or business school after high school
- College: less than 2 years
- College: associate's degree (A.A.)
- College: 2 or more years, no degree
- College graduate (B.A. or B.S.)
- Postgraduate, no degree
- Postgraduate degree (M.S., M.A., Ph.D., M.D., etc.)

Respondents who reported less than high school or some high school were asked how many years of education they completed. For certain analyses, some of these groups were collapsed. For example, respondents who had completed postgraduate studies but had not received a degree were generally combined with those who had completed a postgraduate degree.

Employment Status

Employment status was coded as one of the following:

- Full time or working two or more part time jobs
- Part time
- Unemployed, laid off, or looking for work
- Not in the labor force (retired, in school, keeping house, or doing volunteer work)

Language Spoken Before Starting School

All respondents were asked what language or languages they learned to speak before starting school. For the SAAL reports, responses to this question were coded into one of three categories:

- English only
- English and other language
- Non-English language

Race/ethnicity

All respondents were asked two questions about their race and ethnicity. The first question asked them to indicate whether they were Hispanic or Latino. The second question asked them to choose one or more of the following groups to describe themselves:

- White
- Black or African American
- Asian
- American Indian or Alaskan Native
- Native Hawaiian or other Pacific Islander

Individuals who responded "yes" to the first question were coded as Hispanic, regardless of their answer to the second question.

If the respondent was non-Hispanic and indicated only one race, then he or she was grouped as the race indicated. If the respondent was non-Hispanic and indicated multiple races, then he or she was coded as "other/multiracial." For reporting purposes, "Asian" and "Native Hawaiian or other Pacific Islander" were collapsed into one category. There were too few cases in the "other/multiracial" category to reliably estimate their literacy proficiencies.

Sex

Interviewers recorded the sex of each respondent.



Appendix B: Sample Assessment Questions

Respondents who participated in the 2003 Massachusetts State Assessment of Adult Literacy and the 2003 National Assessment of Adult Literacy were asked to complete prose, document, and quantitative literacy tasks of varying levels of difficulty. The sample questions on the following pages illustrate the types of tasks used to measure the literacy of America's adults. These questions were originally developed for the 1992 National Adult Literacy Survey and were reused in 2003.

Consistent with the design of the assessment, each sample question appears before the text or document needed to answer the question. The percentage of respondents who answered the questions correctly is reported, as well as the percentage of correct responses for each of the four literacy assessment levels.

More information about the sample assessment questions can be found on the Internet at <http://nces.ed.gov/naal>.

Prose Literacy Question

Refer to the article on the next page to answer the following question.

According to the brochure, why is it difficult for people to know if they have high blood pressure?

Correct answer

Any statement such as the following:

Symptoms are not usually present

High blood pressure is silent

Percentage of adults who answered the question correctly, 2003

| All Adults | | <i>Below Basic</i> | | <i>Basic</i> | | <i>Intermediate</i> | | <i>Proficient</i> | |
|------------|----------|--------------------|----------|--------------|----------|---------------------|----------|-------------------|----------|
| Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| 79 (2.6) | 76 (1.0) | 10 (7.1) | 14 (2.0) | 68 (7.7) | 71 (1.9) | 97 (1.8) | 95 (0.6) | 100 (0.4) | 99 (0.4) |

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

TOO MANY BLACK ADULTS DIE FROM THE EFFECTS OF HIGH BLOOD PRESSURE

DID YOU KNOW?

More than one out of every four Black adults has high blood pressure, according to a two-year survey by Public Health Service in the 1960's. Other studies show as many as one out of three Black adults has high blood pressure.

High blood pressure is the most common chronic disease treated by practitioners in the Black community.

More Black people die as a result of high blood pressure than any other disease.

For every Black person who dies of sickle-cell anemia, at least 100 others die from the effects of high blood pressure.

The rate of death from the effects of high blood pressure for Black people is nearly one and one-half times the rate for White people.

High blood pressure, along with cigarette smoking, contributes greatly to the apparent increased number of heart attacks among Black adults.

If high blood pressure is controlled, strokes, heart attacks and kidney disease can be substantially reduced.

YES, HIGH BLOOD PRESSURE CAN BE TREATED... AND CONTROLLED.

WHAT YOU CAN DO

Have your blood pressure checked regularly

Unfortunately, high blood pressure is a silent killer and crippler. At least half of the people who have high blood pressure don't know it because symptoms usually are not present. The only way you can be sure is to have the doctor check your blood pressure. You should have your blood pressure checked at least once a year, especially if: (1) you are Black, (2) if you are over 40, (3) if members of your family or close relatives have had high blood pressure or the complications of high blood pressure (stroke, heart attack, or kidney disease), or (4) if you have frequent headaches, dizziness, or other symptoms that may occasionally be related to high blood pressure.

Follow your doctor's instructions

High blood pressure can't be cured, but it can be kept under control. Control means keeping your blood pressure as close to normal as possible. That's very important to you — it can prevent a crippling stroke or other serious illness in the future.

The doctor will find a way to control your blood pressure that's most comfortable for you. Then it will be up to you — to take the medicine and follow the prescribed diet, to follow the instructions carefully and to come back regularly for checkups.

Yes, high blood pressure can be controlled, but only if *you* cooperate fully with your doctor.

Prose Literacy Question

Refer to the article on the next page to answer the following question.

What is the purpose of the *Se Habla Español* expo?

Correct answer

Any statement such as the following:

- To enable people to better serve and sell to the Hispanic community
- To improve marketing strategies to the Hispanic community
- To enable people to establish contacts to serve the Hispanic community

Percentage of adults who answered the question correctly, 2003

| All Adults | | <i>Below Basic</i> | | <i>Basic</i> | | <i>Intermediate</i> | | <i>Proficient</i> | |
|------------|----------|--------------------|---------|--------------|---------|---------------------|----------|-------------------|----------|
| Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| 16 (2.6) | 17 (0.8) | 0 (0.5) | 0 (0.3) | 3 (2.1) | 3 (0.7) | 10 (3.6) | 16 (1.4) | 57 (7.9) | 60 (2.9) |

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

MARKETING

Se Habla Español Hits Chicago

September 25, 26, and 27 are three days that will change your marketing.

"To some advertisers, the Hispanic market's like the weather—you hear a lot about it, but you can't do much about it," says veteran marketer Tony Martinez. "And other companies think Hispanics will buy their products anyway, so they don't need to do anything special.

"Both attitudes are way off base," Mr. Martinez says briskly, "and they'll both make the competition ecstatic. Because there's a lot of money to be made in the Hispanic market. Its spending power will be \$160 billion this year, and that's growing maybe \$1.4 billion a month," he exclaims, peering intensely over his glasses. "For example, we Hispanics buy 9 percent of all new automobiles.

"This is definitely a special market...you do have to have a special understanding of it," Mr. Martinez goes on, "because as one research firm said, it's 'a market with currents that are going in many directions.' But the rewards will be fantastic. Hispanics are very brand conscious and they tend to become brand loyal very quickly."

It's Mr. Martinez's job—his mission in life—to make sure companies learn how they can serve and sell to America's Hispanics. He has been marketing to the community for many years, working with the best in the business, including Coca-Cola and the advertising firm of Castor GS&B. Now his staff is organizing the largest annual Hispanic market trade show in the business—*Se Habla Español*.

The three-day *Se Habla Español* expo, put on by HISPANIC BUSINESS magazine, is in Chicago this year, at the Hyatt Regency. As in the two previous years in New York and Los Angeles, this conference will host a "big top"-like mix of activities.

The show draws thousands of the country's top marketers, media people, advertisers, researchers, and Hispanic contractors—all intent on gathering as much information as possible, and all hoping to explore new business opportunities. As in any really good big-top show, a hundred different things are happening all at once.

More than 60 Hispanic market specialists conduct fact-heavy seminars. Companies promoting everything from cars to demographic information to career opportunities for Hispanic professionals display and discuss their products in 30,000 square feet of exhibit space. Major exhibitors this year include Ford Motor Co., Lincoln-Mercury, Chevrolet, American Airlines, Telemundo, the Bureau of the Census, and many, many more.

"It's all contacts . . . contacts . . . contacts!" Mr. Martinez exclaims in his best marketing ringmaster style.

Each of the major media hosts its own luncheon or reception, playing to sold-out crowds. Leading participants in last year's Print Reception, for example, included *La Opinion* of Los Angeles, *Vista* magazine, *The Miami Herald*, and the *Los Angeles*

Times. Some participants in the 1989 Radio Luncheon included Katz Hispanic Radio and Caballero Spanish Media. "We still have a few events open to corporate sponsors," Mr. Martinez mentions, not without interest. "They'll be able to count on considerable media play both in preliminary press coverage and during the events themselves."

Another opportunity for sponsor visibility is the *Se Habla Español* Scholarship Fund, which will publicly award scholarships to talented Hispanic students in the various communications fields.

A grand finale black tie banquet spotlights the leading figures in America's Hispanic media world, recognizing outstanding work in each medium with the *Se Habla Español Awards in Communication*. In 1989, Mr. Martinez recalls, almost 400 entries were submitted. Publicidad Siboney swept the top honors for "Ad of the Year" and "TV Ad of the Year" with its commercial for Pepsi-Cola.

One problem attendees find is that the conference offers more information than any one person can gather during just three days. "They should know their priorities," Mr. Martinez advises, "to ensure they focus on the events that will be of most value to their employers."

Reprinted by permission of *Hispanic Business Magazine*.

Document Literacy Question

Seventy-eight percent of what specific group agree that their school does a good job of encouraging parental involvement in educational areas?

Parents and Teachers Evaluate Parental Involvement at Their School

Do you agree or disagree that...?

| | Total | Level of School | | |
|--|-------|-----------------|-------------|-------------|
| | | Elementary | Junior High | High School |

Our school does a good job of encouraging parental involvement in sports, arts, and other nonsubject areas

| | | | | |
|-----------------|----|----|----|----|
| Parents | 77 | 76 | 74 | 79 |
| Teachers | 77 | 73 | 77 | 85 |

Our school does a good job of encouraging parental involvement in educational areas

| | | | | |
|-----------------|----|----|----|----|
| Parents | 73 | 82 | 71 | 64 |
| Teachers | 80 | 84 | 78 | 70 |

Our school only contacts parents when there is a problem with their child

| | | | | |
|-----------------|----|----|----|----|
| Parents | 55 | 46 | 62 | 63 |
| Teachers | 23 | 18 | 22 | 33 |

Our school does not give parents the opportunity for any meaningful roles

| | | | | |
|-----------------|----|----|----|----|
| Parents | 22 | 18 | 22 | 28 |
| Teachers | 8 | 8 | 12 | 7 |

Source: The Metropolitan Life Survey of the American Teacher. 1987

Reduced from original copy

Correct answer

Junior high teachers

Percentage of adults who answered the question correctly, 2003

| All Adults | | Below Basic | | Basic | | Intermediate | | Proficient | |
|------------|----------|-------------|---------|---------|---------|--------------|----------|------------|----------|
| Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| 47 (4.8) | 37 (1.2) | 0 (0.2) | 0 (0.4) | 9 (6.2) | 4 (2.1) | 55 (9.4) | 46 (3.4) | 98 (4.7) | 97 (1.4) |



Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Quantitative Literacy Question

Suppose that you had your oil tank filled with 140.0 gallons of oil, as indicated on the bill, and you wanted to take advantage of the five cents (\$.05) per gallon deduction.

- Figure out how much the deduction would be if you paid the bill within 10 days. Enter the amount of the deduction on the bill in the space provided.

|  | | ASHLAND OIL, INC. | | 18609 | | | |
|--|---------|--|-----------|--|-------------|-----------|--------------|
| Ashland, Kentucky | | 41114 (606) 392-3333 | | DATE | | 2/2/02 | |
| ROBERT NELSON DIVERTY ROAD ASHLAND, KY 41114 | | P/R 4TH HOUSE ON LEFT FILL REAR IN DRIVEWAY | | CUSTOMER NO. | | 002316 | |
| TANK SIZE | GALLONS | ZONE | STOP LOC. | DELIVERY TYPE | DEGREE DAYS | K. FACTOR | PRODUCT CODE |
| 275 | 180 | 28 | 0 | AU HO | 3247 | 8.30 | 2 |
| CUSTOMER'S SIGNATURE | | | | | | | |
|  | | | | | | | |
| TANK TRUCK SALESMAN | | | | | | TRUCK NO. | |
| METER READING – BEFORE AND AFTER DELIVERY | | | | | | | |
| A A 0 0 3 | | | | 0 0 1 4 0 ⁰ / ₁₀ | | | |
| A A 0 0 2 | | | | 0 0 0 0 0 ⁰ / ₁₀ | | | |
| PRODUCT | PRICE | GALLONS | 10TH | AMOUNT | | | |
| FUEL OIL | 97.9 | 140 | 0 | 137 06 | | | |
| SAVE if no outstanding balance due and you pay within 10 days | | | | DEDUCT \$.05 per gal. | | | |
| | | | | NET TOTAL ↓ | | | |

Reduced from original copy

Correct answer

\$7.00

Percentage of adults who answered the question correctly, 2003

| All Adults | | Below Basic | | Basic | | Intermediate | | Proficient | |
|------------|----------|-------------|---------|-----------|----------|--------------|----------|------------|-----------|
| Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| 64 (4.0)* | 54 (1.1) | 2 (7.5) | 1 (1.2) | 44 (20.6) | 39 (5.1) | 90 (4.7) | 91 (1.7) | 100 (0.8) | 100 (0.5) |

* Significantly different from the nation.

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Document and Quantitative Literacy Questions

This is an example of a task that was scored in three separate parts and treated as three separate questions. The first two questions were included on the document scale and the third question was included on the quantitative scale.

Refer to the form on the next page to answer the following question.

Use the following information to fill in the receipt for certified mail. Then fill in the “TOTAL Postage and Fees” line.

- You are sending a package to Doris Carter.
- Her address is 19 Main Street, Augusta, GA 30901.
- The postage for the package is \$1.86.
- The fee for certified mail is \$0.75.

Correct answer

Question 1 (Document): Enters name and address correctly. No penalty for misspelling.

Percentage of adults who answered the question correctly, 2003

| All Adults | | <i>Below Basic</i> | | <i>Basic</i> | | <i>Intermediate</i> | | <i>Proficient</i> | |
|------------|----------|--------------------|----------|--------------|----------|---------------------|----------|-------------------|----------|
| Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| 71 (3.3) | 68 (1.3) | 9 (7.3) | 12 (2.7) | 50 (9.0) | 50 (3.0) | 86 (3.3) | 83 (1.3) | 96 (3.9) | 97 (0.9) |

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Correct answer

Question 2 (Document): Enters \$1.86 and \$0.75 on the postage and certified fees lines respectively.

Percentage of adults who answered the question correctly, 2003

| All Adults | | <i>Below Basic</i> | | <i>Basic</i> | | <i>Intermediate</i> | | <i>Proficient</i> | |
|------------|----------|--------------------|----------|--------------|----------|---------------------|----------|-------------------|----------|
| Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| 82 (3.7) | 78 (1.1) | 7 (6.3) | 18 (3.1) | 80 (6.5) | 70 (2.5) | 94 (2.1) | 94 (0.7) | 97 (2.1) | 99 (0.4) |

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Correct answer

Question 3 (Quantitative): Either of the following:

Correctly totals postage and fees: \$2.61

Correctly totals incorrect fees entered on form

Percentage of adults who answered the question correctly, 2003

| All Adults | | <i>Below Basic</i> | | <i>Basic</i> | | <i>Intermediate</i> | | <i>Proficient</i> | |
|------------|----------|--------------------|----------|--------------|----------|---------------------|----------|-------------------|----------|
| Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| 82 (3.5) | 81 (0.9) | 31 (8.4) | 41 (2.5) | 88 (3.3) | 85 (1.1) | 95 (2.3) | 94 (0.7) | 96 (2.2) | 98 (0.6) |

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

What may be Certified?

Only items of no intrinsic value such as letters, files, records, etc., that are sent Priority First-Class Mail may be sent by certified mail. No insurance coverage is provided against loss or damage for this service. (For valuables and irreplaceable items, you should use insured or registered mail.)



How to use Certified Mail.

Simply fill out Form 3800, *Receipt for Certified Mail*, and attach (to the address side of the mail) the numbered label portion and the required postage and fee. You may obtain these forms at post offices or from rural carriers. Many customers find it convenient and a “time-saver” to have the form completed before approaching the window. Certified mail, with proper postage and fees affixed, may be dropped in a mailbox unless an official dated receipt is required.

Restricted Delivery

If you want to restrict the delivery of certified mail, you must endorse the mail “Restricted Delivery.” This service is available for a \$1.00 fee and can only be used for items addressed to specific individuals by name. However, the addressee can and often does authorize an agent to receive his or her restricted mail.

Fees

The fee for certified mail is 75 cents (in addition to your postage). For an additional fee, you also may purchase a return receipt which provides you proof of delivery.

P 138 573 931

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

| | |
|---|----|
| Sent to | |
| Street and No. | |
| P.O., State and ZIP Code | |
| Postage | \$ |
| Certified Fee | |
| Special Delivery Fee | |
| Restricted Delivery Fee | |
| Return Receipt showing to whom and Date Delivered | |
| Return Receipt showing to whom, Date, and Address of Delivery | |
| TOTAL Postage and Fees | \$ |
| Postmark or Date | |

PS FORM 3800, June 1985

Fold at line over top of envelope to the right of the return address.

CERTIFIED

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MAIL



Appendix C: Standard Errors for Tables and Figures

Table C1. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation: 2003

| Literacy scale | Mass. | Nation |
|----------------|------------|-----------|
| Prose | 289 (3.0)* | 275 (1.3) |
| Document | 282 (4.1)* | 271 (1.2) |
| Quantitative | 297 (3.6)* | 283 (1.2) |

* Significantly different from the nation.

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C2. Percentage of adults in Massachusetts and the nation in each prose, document, and quantitative literacy level: 2003

| Literacy scale | <i>Below Basic</i> | | <i>Basic</i> | | <i>Intermediate</i> | | <i>Proficient</i> | |
|----------------|--------------------|----------|--------------|----------|---------------------|----------|-------------------|----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| Prose | 9 (1.3)* | 14 (0.6) | 23 (1.3)* | 29 (0.6) | 49 (1.8)* | 44 (0.7) | 19 (1.4)* | 13 (0.5) |
| Document | 8 (1.7)* | 12 (0.5) | 18 (1.6)* | 22 (0.5) | 57 (2.5) | 53 (0.7) | 17 (2.3) | 13 (0.6) |
| Quantitative | 15 (1.6)* | 21 (0.6) | 31 (1.4) | 33 (0.5) | 34 (1.5) | 33 (0.5) | 20 (1.6)* | 14 (0.5) |

* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding. Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C3. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation, by race/ethnicity: 2003

| Race/ethnicity | Prose | | Document | | Quantitative | |
|----------------|------------|-----------|------------|-----------|--------------|-----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| White | 297 (2.1)* | 289 (1.5) | 288 (2.9)* | 282 (1.5) | 304 (3.1)* | 297 (1.3) |
| Black | 240 (10.0) | 243 (1.8) | 235 (11.7) | 238 (2.2) | 244 (12.2) | 238 (2.2) |
| Hispanic | 214 (11.3) | 216 (3.6) | 212 (17.4) | 224 (3.6) | 217 (11.3) | 233 (3.2) |

* Significantly different from the nation.

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C4. Percentage of adults in Massachusetts and the nation in each prose, document, and quantitative literacy level, by race/ethnicity: 2003

| Literacy scale and race/ethnicity | <i>Below Basic</i> | | <i>Basic</i> | | <i>Intermediate</i> | | <i>Proficient</i> | |
|-----------------------------------|--------------------|----------|--------------|----------|---------------------|----------|-------------------|----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| Prose | | | | | | | | |
| White | 6 (0.8) | 7 (0.5) | 21 (1.3)* | 25 (0.8) | 53 (1.7) | 51 (0.9) | 21 (1.4)* | 17 (0.9) |
| Black | 25 (9.0) | 24 (1.4) | 44 (8.2) | 43 (1.2) | 29 (8.6) | 31 (1.4) | 1 (2.3) | 2 (0.5) |
| Hispanic | 46 (5.3) | 45 (1.8) | 26 (3.9) | 29 (1.0) | 25 (3.9) | 22 (1.1) | 3 (1.6) | 4 (0.5) |
| Document | | | | | | | | |
| White | 5 (1.1)* | 8 (0.5) | 17 (1.7) | 19 (0.7) | 62 (2.6) | 58 (1.0) | 17 (2.5) | 15 (1.0) |
| Black | 25 (7.1) | 24 (1.8) | 36 (7.4) | 35 (1.4) | 37 (9.6) | 40 (1.9) | 2 (2.5) | 2 (0.5) |
| Hispanic | 43 (7.1) | 36 (1.7) | 20 (3.4) | 26 (0.8) | 30 (4.8) | 33 (1.2) | 8 (2.6) | 5 (0.5) |
| Quantitative | | | | | | | | |
| White | 11 (1.4) | 13 (0.7) | 30 (1.7) | 32 (0.8) | 38 (1.8) | 39 (0.8) | 21 (1.9)* | 17 (0.8) |
| Black | 44 (7.0) | 47 (1.8) | 34 (4.9) | 36 (1.3) | 17 (4.8) | 15 (1.1) | 6 (3.1) | 2 (0.4) |
| Hispanic | 56 (5.7) | 50 (1.7) | 26 (3.7) | 29 (1.0) | 16 (3.5) | 17 (0.9) | 3 (0.9) | 4 (0.5) |

* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding. Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C5. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation, by gender: 2003

| Gender | Prose | | Document | | Quantitative | |
|--------|------------|-----------|------------|-----------|--------------|-----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| Female | 286 (3.9)* | 277 (1.4) | 281 (4.7) | 272 (1.2) | 286 (4.6) | 279 (1.3) |
| Male | 293 (4.0)* | 273 (1.6) | 284 (4.5)* | 269 (1.5) | 309 (3.3)* | 287 (1.3) |

* Significantly different from the nation.

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C6. Percentage of adults in Massachusetts and the nation in each prose, document, and quantitative literacy level, by gender: 2003

| Literacy scale and gender | <i>Below Basic</i> | | <i>Basic</i> | | <i>Intermediate</i> | | <i>Proficient</i> | |
|---------------------------|--------------------|----------|--------------|----------|---------------------|----------|-------------------|----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| Prose | | | | | | | | |
| Female | 10 (1.7) | 12 (0.6) | 25 (1.6)* | 28 (0.6) | 49 (2.1) | 46 (0.8) | 17 (1.8) | 14 (0.6) |
| Male | 9 (1.4)* | 15 (0.6) | 21 (1.7)* | 29 (0.7) | 49 (2.5)* | 43 (0.7) | 21 (2.2)* | 13 (0.6) |
| Document | | | | | | | | |
| Female | 10 (1.9) | 11 (0.6) | 19 (1.7) | 22 (0.6) | 53 (2.6) | 54 (0.8) | 18 (2.1)* | 13 (0.6) |
| Male | 6 (1.8)* | 14 (0.6) | 18 (2.4)* | 23 (0.5) | 61 (3.5)* | 51 (0.8) | 15 (3.3) | 13 (0.6) |
| Quantitative | | | | | | | | |
| Female | 20 (2.1) | 22 (0.8) | 33 (1.8) | 35 (0.7) | 33 (1.9) | 32 (0.7) | 15 (1.9)* | 11 (0.6) |
| Male | 11 (1.3)* | 21 (0.6) | 28 (1.8) | 31 (0.5) | 36 (1.6)* | 33 (0.5) | 25 (1.8)* | 16 (0.6) |

* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding. Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C7. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation, by age: 2003

| Age | Prose | | Document | | Quantitative | |
|-------|------------|-----------|------------|-----------|--------------|-----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| 16–18 | 275 (11.0) | 267 (2.8) | 291 (9.2)* | 268 (2.9) | 299 (9.6)* | 267 (3.1) |
| 19–24 | 292 (7.0)* | 276 (2.4) | 287 (8.3) | 278 (2.5) | 292 (10.8) | 280 (2.3) |
| 25–39 | 294 (4.1)* | 284 (1.7) | 290 (6.0) | 283 (1.8) | 301 (3.7)* | 292 (1.8) |
| 40–49 | 299 (4.3)* | 282 (2.3) | 292 (5.5)* | 278 (1.8) | 304 (5.3)* | 289 (1.9) |
| 50–64 | 296 (4.0)* | 278 (1.9) | 282 (5.3)* | 270 (2.1) | 301 (6.8) | 289 (1.9) |
| 65+ | 263 (6.8)* | 248 (2.0) | 250 (5.9)* | 235 (2.0) | 273 (7.0)* | 257 (2.2) |

* Significantly different from the nation.

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C8. Percentage of adults in Massachusetts and the nation in each prose, document, and quantitative literacy level, by age: 2003

| Literacy scale and age | Below Basic | | Basic | | Intermediate | | Proficient | |
|------------------------|-------------|----------|-----------|----------|--------------|----------|------------|----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| Prose | | | | | | | | |
| 16–18 | 7 (7.9) | 11 (1.7) | 31 (16.8) | 37 (2.5) | 58 (17.3) | 48 (2.7) | 4 (8.2) | 5 (1.4) |
| 19–24 | 7 (2.8) | 11 (1.1) | 22 (3.5) | 29 (1.3) | 54 (4.9) | 48 (1.5) | 18 (4.3) | 12 (1.2) |
| 25–39 | 8 (1.8)* | 12 (0.6) | 24 (2.0) | 25 (0.7) | 46 (2.2) | 45 (0.8) | 22 (2.2) | 18 (0.8) |
| 40–49 | 8 (1.5) | 11 (0.9) | 18 (1.8)* | 26 (1.1) | 49 (2.7) | 47 (1.2) | 25 (2.2)* | 16 (1.1) |
| 50–64 | 8 (1.7)* | 13 (0.8) | 19 (2.0)* | 27 (0.9) | 51 (2.5)* | 44 (1.1) | 22 (2.2)* | 15 (0.8) |
| 65+ | 17 (3.5) | 23 (1.3) | 34 (3.3) | 38 (1.2) | 40 (4.2) | 34 (1.4) | 9 (2.2)* | 4 (0.6) |
| Document | | | | | | | | |
| 16–18 | 5 (3.5) | 11 (1.4) | 16 (5.3) | 24 (1.8) | 62 (9.0) | 56 (2.4) | 18 (8.4) | 9 (1.7) |
| 19–24 | 9 (3.2) | 9 (1.1) | 17 (2.6) | 20 (1.2) | 53 (3.5) | 58 (1.7) | 22 (3.7)* | 14 (1.5) |
| 25–39 | 6 (2.6) | 8 (0.7) | 16 (2.5) | 19 (0.7) | 56 (3.9) | 56 (1.1) | 21 (3.7) | 17 (1.1) |
| 40–49 | 6 (2.0)* | 10 (0.7) | 14 (2.3)* | 20 (0.8) | 59 (4.0) | 54 (1.1) | 21 (4.0) | 16 (0.9) |
| 50–64 | 8 (2.4) | 12 (0.9) | 17 (2.5)* | 23 (0.9) | 59 (3.5) | 54 (1.3) | 16 (3.2) | 12 (1.1) |
| 65+ | 16 (4.7)* | 27 (1.5) | 32 (4.4) | 33 (1.0) | 48 (6.2) | 38 (1.4) | 3 (2.1) | 3 (0.4) |
| Quantitative | | | | | | | | |
| 16–18 | 13 (4.3)* | 28 (2.3) | 32 (5.4) | 38 (2.1) | 35 (6.0) | 28 (2.1) | 20 (4.9)* | 6 (1.3) |
| 19–24 | 19 (3.6) | 21 (1.4) | 28 (3.5)* | 36 (1.3) | 31 (2.8) | 33 (1.4) | 22 (4.3)* | 10 (1.1) |
| 25–39 | 13 (2.3) | 17 (0.8) | 30 (1.8) | 31 (0.8) | 35 (2.1) | 35 (0.8) | 22 (2.0)* | 17 (1.0) |
| 40–49 | 14 (1.9)* | 19 (1.0) | 27 (3.4) | 31 (0.8) | 35 (2.5) | 34 (0.9) | 24 (2.6)* | 16 (0.9) |
| 50–64 | 11 (3.3)* | 19 (1.0) | 32 (4.3) | 30 (0.8) | 38 (4.2) | 34 (0.9) | 19 (4.5) | 17 (0.8) |
| 65+ | 24 (3.9)* | 34 (1.6) | 37 (2.8) | 37 (1.2) | 29 (3.1) | 24 (1.2) | 10 (2.5) | 5 (0.6) |

* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding. Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C9. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation, by language spoken before starting school: 2003

| Language | Prose | | Document | | Quantitative | |
|----------------------------|------------|-----------|------------|-----------|--------------|-----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| English only | 299 (2.2)* | 283 (1.4) | 290 (2.8)* | 276 (1.3) | 306 (2.9)* | 289 (1.2) |
| English and other language | 270 (8.4) | 272 (2.2) | 257 (7.8) | 264 (2.4) | 276 (7.8) | 278 (3.1) |
| Non-English | 223 (9.1) | 212 (3.5) | 223 (14.6) | 223 (3.9) | 230 (7.5) | 235 (4.0) |

* Significantly different from the nation.

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C10. Percentage of adults in Massachusetts and the nation in each prose, document, and quantitative literacy level, by language spoken before starting school: 2003

| Literacy scale and language | <i>Below Basic</i> | | <i>Basic</i> | | <i>Intermediate</i> | | <i>Proficient</i> | |
|-----------------------------|--------------------|----------|--------------|----------|---------------------|----------|-------------------|----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| Prose | | | | | | | | |
| English only | 4 (0.9)* | 9 (0.5) | 20 (1.3)* | 27 (0.7) | 55 (2.0)* | 49 (0.8) | 21 (1.7)* | 15 (0.7) |
| English and other language | 16 (3.1) | 10 (1.2) | 30 (4.2) | 35 (1.9) | 41 (5.4) | 47 (2.0) | 13 (3.2) | 8 (1.2) |
| Non-English | 40 (3.5) | 48 (1.7) | 29 (2.4) | 28 (1.1) | 26 (3.2) | 21 (1.1) | 4 (1.6) | 4 (0.5) |
| Document | | | | | | | | |
| English only | 4 (1.1)* | 9 (0.5) | 15 (1.8)* | 21 (0.6) | 65 (2.9)* | 56 (0.8) | 17 (2.8) | 14 (0.7) |
| English and other language | 17 (5.5) | 11 (1.6) | 28 (4.3) | 27 (1.8) | 49 (5.9) | 56 (2.4) | 6 (3.3) | 6 (1.4) |
| Non-English | 38 (4.1) | 37 (1.7) | 22 (2.2) | 25 (0.8) | 30 (3.3) | 32 (1.2) | 10 (3.1) | 6 (0.6) |
| Quantitative | | | | | | | | |
| English only | 9 (1.3)* | 18 (0.6) | 31 (1.8) | 33 (0.6) | 39 (1.9) | 35 (0.6) | 21 (2.0)* | 15 (0.6) |
| English and other language | 29 (4.1) | 21 (2.1) | 28 (3.0)* | 38 (1.9) | 28 (3.3) | 31 (2.0) | 15 (2.8) | 10 (1.6) |
| Non-English | 48 (2.9) | 49 (1.8) | 26 (1.8) | 28 (0.9) | 19 (1.3) | 18 (1.1) | 8 (1.8) | 6 (0.7) |

* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding. Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C11. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation, by educational attainment: 2003

| Educational attainment | Prose | | Document | | Quantitative | |
|----------------------------|------------|-----------|------------|-----------|--------------|-----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| Less than/some high school | 207 (11.0) | 206 (2.4) | 214 (15.9) | 208 (2.6) | 216 (14.2) | 211 (2.3) |
| High school graduate | 272 (4.3)* | 262 (1.3) | 268 (6.7) | 258 (1.5) | 275 (4.6) | 269 (1.6) |
| Vocational degree | 293 (6.5)* | 268 (2.7) | 275 (8.6) | 267 (2.6) | 289 (5.1) | 279 (2.2) |
| Some college | 287 (7.0) | 287 (1.6) | 284 (4.9) | 280 (1.7) | 296 (5.8) | 295 (1.7) |
| Associate's/2-year degree | 303 (3.5) | 298 (2.4) | 283 (5.2) | 291 (2.0) | 308 (5.6) | 305 (2.1) |
| College graduate | 316 (4.3) | 314 (2.1) | 299 (3.4) | 303 (2.2) | 326 (3.8) | 323 (1.8) |
| Graduate studies/degree | 333 (4.7) | 327 (2.8) | 317 (6.1) | 311 (2.2) | 343 (6.4) | 332 (2.1) |

* Significantly different from the nation.

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C12. Percentage of adults in Massachusetts and the nation in each prose, document, and quantitative literacy level, by educational attainment: 2003

| Literacy scale and educational attainment | <i>Below Basic</i> | | <i>Basic</i> | | <i>Intermediate</i> | | <i>Proficient</i> | |
|---|--------------------|----------|--------------|----------|---------------------|----------|-------------------|----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| Prose | | | | | | | | |
| Less than/some high school | 48 (5.8) | 51 (1.5) | 29 (3.5) | 32 (1.0) | 20 (4.1) | 16 (0.9) | 2 (1.1) | 1 (0.2) |
| High school graduate | 8 (3.1) | 13 (1.0) | 34 (4.5) | 39 (1.2) | 53 (4.8) | 44 (1.3) | 5 (2.6) | 4 (0.6) |
| Vocational degree | 1 (3.0)* | 10 (1.8) | 20 (13.7) | 36 (2.6) | 69 (16.6) | 49 (2.7) | 10 (11.9) | 5 (1.5) |
| Some college | 8 (2.5) | 5 (0.7) | 23 (4.2) | 25 (1.4) | 54 (4.9) | 59 (1.7) | 15 (4.1) | 12 (1.4) |
| Associate's/2-year degree | 3 (1.2) | 4 (0.7) | 17 (2.8) | 20 (1.6) | 60 (4.5) | 56 (2.0) | 20 (3.9) | 19 (2.0) |
| College graduate | 2 (0.7) | 3 (0.5) | 15 (2.1) | 14 (1.0) | 50 (3.6) | 53 (1.7) | 33 (3.5) | 31 (1.8) |
| Graduate studies/degree | 2 (1.0) | 1 (0.4) | 6 (1.6)* | 10 (1.2) | 48 (4.5) | 48 (2.3) | 46 (4.8) | 41 (2.6) |
| Document | | | | | | | | |
| Less than/some high school | 43 (6.4) | 45 (1.4) | 18 (1.5)* | 29 (0.7) | 30 (5.1) | 25 (1.1) | 9 (2.2)* | 2 (0.3) |
| High school graduate | 9 (4.2) | 13 (1.0) | 25 (5.0) | 29 (1.1) | 59 (6.6) | 52 (1.4) | 7 (4.3) | 5 (0.7) |
| Vocational degree | 6 (14.6) | 9 (1.5) | 24 (23.3) | 26 (2.3) | 61 (29.5) | 59 (2.8) | 10 (19.6) | 7 (1.7) |
| Some college | 5 (2.1) | 5 (0.8) | 15 (3.5) | 19 (1.3) | 68 (5.3) | 65 (1.8) | 13 (4.6) | 11 (1.5) |
| Associate's/2-year degree | 3 (2.4) | 3 (0.7) | 18 (4.9) | 15 (1.5) | 68 (6.8) | 66 (2.3) | 10 (5.7) | 16 (2.2) |
| College graduate | 3 (1.0) | 2 (0.6) | 13 (2.0) | 11 (1.2) | 62 (3.9) | 62 (2.5) | 23 (3.7) | 25 (2.7) |
| Graduate studies/degree | 1 (0.8) | 1 (0.4) | 7 (3.1) | 9 (1.1) | 56 (8.7) | 59 (2.6) | 36 (9.3) | 31 (2.8) |
| Quantitative | | | | | | | | |
| Less than/some high school | 55 (5.0) | 64 (1.3) | 26 (3.6) | 25 (0.8) | 13 (2.7) | 10 (0.7) | 6 (2.8) | 1 (0.2) |
| High school graduate | 20 (4.1) | 24 (1.4) | 44 (4.4) | 42 (1.3) | 31 (4.2) | 29 (1.4) | 6 (2.8) | 5 (0.7) |
| Vocational degree | 9 (6.3) | 18 (2.1) | 43 (9.3) | 41 (2.3) | 42 (8.9) | 35 (2.3) | 7 (5.7) | 6 (1.4) |
| Some college | 11 (3.1) | 10 (1.2) | 31 (4.1) | 36 (1.8) | 44 (4.5) | 43 (1.8) | 13 (3.8) | 11 (1.6) |
| Associate's/2-year degree | 8 (2.7) | 7 (1.1) | 28 (4.0) | 30 (1.9) | 44 (4.8) | 45 (2.1) | 20 (5.1) | 18 (2.1) |
| College graduate | 2 (1.2) | 4 (0.6) | 21 (3.3) | 22 (1.2) | 45 (4.4) | 44 (1.5) | 31 (4.9) | 31 (1.9) |
| Graduate studies/degree | 2 (1.2) | 3 (0.6) | 17 (2.8) | 18 (1.5) | 35 (4.1) | 43 (2.1) | 46 (5.2) | 36 (2.6) |

* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding. Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C13. Average prose, document, and quantitative literacy of adults in Massachusetts and the nation, by employment status: 2003

| Employment | Prose | | Document | | Quantitative | |
|--------------------|------------|-----------|------------|-----------|--------------|-----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| Employed full time | 301 (4.3)* | 285 (1.5) | 291 (4.6)* | 281 (1.2) | 311 (3.7)* | 296 (1.1) |
| Employed part time | 284 (4.6) | 281 (2.2) | 288 (7.6) | 277 (2.2) | 296 (5.7) | 287 (2.2) |
| Unemployed | 291 (12.5) | 269 (2.8) | 285 (16.5) | 265 (3.3) | 300 (11.8)* | 270 (3.6) |
| Not in labor force | 271 (5.3)* | 255 (1.7) | 263 (7.3) | 250 (1.9) | 273 (5.4)* | 261 (1.8) |

* Significantly different from the nation.

Note: Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.

Table C14. Percentage of adults in Massachusetts and the nation in each employment category, by prose, document, and quantitative literacy level: 2003

| Literacy scale and literacy level | Not in labor force | | Unemployed | | Part time | | Full time | |
|-----------------------------------|--------------------|----------|------------|---------|-----------|----------|-----------|----------|
| | Mass. | Nation | Mass. | Nation | Mass. | Nation | Mass. | Nation |
| Prose | | | | | | | | |
| <i>Below Basic</i> | 51 (6.3) | 51 (1.8) | 3 (2.8) | 5 (0.6) | 23 (4.9)* | 10 (0.9) | 23 (5.5)* | 35 (1.8) |
| <i>Basic</i> | 40 (3.6) | 38 (1.1) | 5 (1.8) | 6 (0.4) | 19 (2.2)* | 12 (0.6) | 37 (3.8) | 44 (1.1) |
| <i>Intermediate</i> | 27 (2.4) | 27 (0.9) | 6 (1.3) | 5 (0.3) | 19 (1.4)* | 14 (0.6) | 49 (2.4)* | 54 (0.9) |
| <i>Proficient</i> | 22 (3.4) | 18 (1.3) | 4 (2.6) | 3 (0.5) | 17 (2.6) | 14 (1.1) | 58 (4.4) | 64 (1.6) |
| Document | | | | | | | | |
| <i>Below Basic</i> | 59 (9.3) | 55 (1.9) | 6 (2.8) | 5 (0.6) | 20 (5.6) | 9 (1.0) | 16 (9.8) | 32 (1.7) |
| <i>Basic</i> | 42 (5.1) | 40 (1.1) | 5 (1.3) | 6 (0.5) | 19 (3.0)* | 12 (0.7) | 34 (6.5) | 42 (1.1) |
| <i>Intermediate</i> | 26 (2.6) | 27 (0.8) | 4 (0.7) | 5 (0.3) | 16 (1.5) | 14 (0.6) | 54 (2.9) | 55 (0.9) |
| <i>Proficient</i> | 21 (5.6) | 19 (1.5) | 7 (2.5) | 4 (0.7) | 27 (5.8)* | 15 (1.4) | 44 (9.6) | 63 (1.9) |
| Quantitative | | | | | | | | |
| <i>Below Basic</i> | 53 (4.9) | 50 (1.4) | 5 (1.7) | 7 (0.5) | 22 (3.6)* | 10 (0.8) | 20 (4.2)* | 34 (1.3) |
| <i>Basic</i> | 36 (2.8) | 34 (1.0) | 4 (0.8) | 5 (0.4) | 18 (1.8)* | 14 (0.7) | 43 (2.9) | 47 (1.0) |
| <i>Intermediate</i> | 25 (2.4) | 25 (0.9) | 5 (0.8) | 4 (0.3) | 17 (1.6)* | 14 (0.7) | 54 (2.6) | 57 (1.0) |
| <i>Proficient</i> | 19 (2.8) | 17 (1.3) | 6 (1.5) | 4 (0.6) | 21 (2.7)* | 13 (1.2) | 54 (4.0)* | 66 (1.6) |

* Significantly different from the nation.

Note: Percentages may not add to 100 because of rounding. Standard errors are in parentheses.

Source: 2003 State Assessment of Adult Literacy and 2003 National Assessment of Adult Literacy.