

THE 2003 NATIONAL ASSESSMENT OF ADULT LITERACY (NAAL): PERFORMANCE
OF AFRICAN AMERICANS IN A NATIONAL CONTEXT

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INTRODUCTION

Literacy is an indispensable tool for effective participation in this 21st Century information age. It opens the minds of individuals to the realities and possibilities of life. Literacy is a condition for partaking in the American dream. It correlates with employment, earning power, and job security. Literacy is a vehicle for lifelong learning and self-actualization.

The advantages enjoyed by those with advanced literacy skills are enormous. These advantages cut across economic, political, social, and emotional spheres of life. The individuals with advanced literacy skills appropriate these advantages because literacy is an enabler of achievement and vocational advancement.

The demand for advanced literacy skills in the workplace is rapidly increasing. Due to technological advancement, employees at every workplace encounter printed and written materials that require advanced literacy skills to read, comprehend, and use. Sticht; Mikulecky; and Rush, Moe, and Storlie (as cited by Kaestle, Campbell, Finn, Johnson, & Mikulecky, 2001), stated that researchers have consistently found the vast majority of prose materials in the workplace to be of high school to college level difficulty. These prose materials include memos, manuals, trouble-shooting directions, and new product information.

On a daily basis, American adults face a barrage of literacy activities at home, work, and in the community. White and Dillow (2005) stated that American adults interact with a variety of printed and other materials to perform a multitude of tasks in their lives. A listing of all the tasks will be daunting. However, the tasks include activities such as filling out a job application, following directions on a prescription medicine bottle, balancing a checkbook, and consulting a bus schedule.

Many American workers do not have the skills and credentials required to secure and hold jobs that pay good wages and provide benefits (Comings, Reder, & Sum, 2001). Adult literacy correlates with employment, earning power, political participation, community service and good health. It enhances national productivity and competitiveness.

A nation that has an adult population with advanced literacy skills will possess multiple advantages over other nations. United States needs an adult population with advanced literacy skills in order to maintain its competitive edge in the global race for supremacy. To ascertain the literacy portrait of America's adults, the National Center for Education Statistics (NCES) administered the 2003 National Assessment of Adult Literacy (NAAL).

WHAT IS NATIONAL ASSESSMENT OF ADULT LITERACY (NAAL)?

Sponsored by the National Center for Education Statistics (NCES) the 2003 NAAL was America's most comprehensive assessment of adult literacy since the 1992 National Adult Literacy Survey (NALS). NAAL was a nationally representative assessment of English literacy among American adults age 16 and older (NCES, 2003).

THE 2003 NAAL STATEMENT OF PROBLEM

Today, America's adults increasingly are expected to use printed and written information in their daily lives, but there is little information available on how well prepared they are. The 2003 NAAL was administered to provide information about the literacy skills of adults in the United States. Educators, researchers, policymakers, and business leaders may use NAAL data to design programs that will assist in improving the literacy skills of America's adults (NCES, 2003).

THE 2003 NAAL RESEARCH QUESTIONS

Two main research questions largely were used to inform the NAAL study. The research questions were; (1) To what extent have the prose, document, and quantitative literacy of America's adults changed between 1992 and 2003? and (2) What is the status of prose, document, and quantitative literacy of America's adults now?

THE 2003 NAAL POPULATION

The population for the 2003 NAAL study consisted of 222.4 million adults age 16 and older living in households or federal and state prisons. Data from the U.S. Census Bureau's 2003 Current Population Survey and the Bureau of Justice Statistics' midyear 2003 National Prisoner Statistics were used to estimate the study population by NAAL researchers. Consistent with the assessment procedures of the 1992 NALS, the population of NAAL did not include adults who lived in institutions other than college dormitories or prisons. In other words, the 2003 NAAL population excluded residents in military barracks, retirement homes, assisted living homes, and homeless shelters (NCES, 2005; Kutner, Greenberg, & Baer, 2005; and White & Dillow, 2005).

THE 2003 NAAL SAMPLE

The sample consisted of over 18,000 adults selected from over 35,000 households that represented the entire U.S. household population age 16 and older and 1,200 inmates from 107 federal and state prisons. The sample included 5,700 adults from states that participated in the state assessments. In an effort to increase both the adequacy of the sample and response rate, an incentive of \$30.00 was paid to all household participants. Hispanic and Black households were

oversampled at the national level to ensure reliable estimates of their literacy proficiencies. Participants with limited English proficiency or disability were given special accommodations (NCES, 2005).

DEFINITION OF LITERACY

Literacy refers to the capacity or ability to use printed or written information to function in society, to achieve one's goals, and to develop one's knowledge and potential (NCES, 2005). This definition of literacy was anchored on the National Literacy Act of 1991 definition of literacy.

LITERACY SCALES MEASURED BY THE 2003 NAAL

Consistent with the 1992 NALS, the 2003 NAAL measured three literacy scale- prose literacy, document literacy, and quantitative literacy.

Prose literacy refers to the knowledge and skills needed to comprehend and use information from continuous texts. Examples include newspaper editorials and articles, brochures, instructional materials, and poems. Prose texts may be subdivided into expository, narrative, procedural, and persuasive.

Document literacy is the knowledge and skills required to search, comprehend, and use information from noncontinuous texts in various formats. Examples include job application, payroll forms, transportation schedules, maps, tables, and drug and food labels.

Quantitative literacy is defined as the knowledge and skills needed to identify and perform computations, either alone or sequentially, using numbers embedded in printed materials. For example, balancing a checkbook, figuring out a tip, completing an order form, or determining an

amount of interest on a loan from an advertisement are quantitative tasks (White & McCloskey, 2006).

LITERACY AREAS AND SCORE RANGES FOR PERFORMANCE LEVELS

Hauser, Edley, Koenig, and Elliott (as cited by White & Dillow, 2005) stated that the 2003 NAAL used four levels to differentiate America's adult literacy performance- Below Basic, Basic, Intermediate, and Proficient levels. The scores for the performance levels range from 0-500, but slightly vary for the different scales as shown in the table that follows.

Table 1. Literacy Areas, Performance Levels, and Range of Scores

	<u>Below Basic</u>	<u>Basic</u>	<u>Intermediate</u>	<u>Proficient</u>
Prose	0-209	210-264	265-339	340-500
Document	0-204	205-249	250-334	335-500
Quantitative	0-234	235-289	290-349	350-500

Source: Hauser, R.M., Edley, C.F. Jr., Koenig, J.A., & Elliott, S.W. (Eds.). (2005). *Measuring Literacy:*

Performance Levels for Adults, Interim Report. Washington, DC: National Academies Press;

White, S., & Dillow, S. (2005). *Key Concepts and Features of the 2003 National Assessment of Adult Literacy.* Washington, DC: National Center for Education Statistics.

THE 2003 NAAL ASSESSMENT QUESTIONS

The 2003 NAAL questions were open-ended, and were drawn from real-life situations that American adults face in their daily lives. Since most real-life situations do not supply multiple-choice questions, NAAL questions required short-answer responses. Each NAAL

assessment question was composed of prose, document, or quantitative literacy task. There were four hybrid assessment questions. The hybrid questions were too few to be used in any specific analysis. The questions required the respondents to read the question, locate, infer, and/or calculate an answer. This reduced the possibility that respondents either randomly or accidentally chose the right answer, without knowing how to obtain it (NCES, n.d.).

THE 2003 NAAL BACKGROUND QUESTIONNAIRE

The 2003 NAAL background questionnaire was used to collect data on background variables. Many of the variables were used to collect background information that was not collected in the 1992 NALS. Interviewers administered the questionnaire orally using a computer-assisted personal interview (CAPI) system. The interviewers targeted questions to appropriate respondents. By this method, no respondent answered all the questions (NCES, 2003).

The 2003 NAAL background questionnaire served three purposes: (1) it was used to provide descriptive data on respondents, (2) it enhanced the understanding of the factors that are associated with literacy skills used at home, at work, or in the community, and (3) it allowed for the reporting of changes over time, especially when compared with the 1992 NALS (NCES).

The 2003 NAAL questionnaire was developed in two versions-the general version and the prison version. The general version contained 10 categories of background questions (NCES). The table below shows the background categories and the number of questions in each category.

Table 2. The 2003 NAAL Questionnaire Background Categories and Number of Questions

<u>Background Category</u>	<u>Number of Questions</u>
General and language background	19
Education and experience	19
Political and social participation	12
Labor force participation	15
Literacy participation	7
Job training and skills	10
Demographic information	9
Family literacy	5
Household income and welfare participation	12
Health	10

Source: U.S. Department of Education. National Center for Education Statistics. 2003 National Assessment of Adult Literacy.

PERFORMANCE OF AFRICAN AMERICAN ADULTS ON THE 2003 NAAL

The poor performance of African American adults on NAAL correlates with the performance of African American students on the reading and writing assessments of the National Assessment of Educational Progress (NAEP). Adults who are not proficient in literacy started the journey as children. The performance of African American adults on all three scales- prose, document, and quantitative literacy- of the 2003 NAAL assessment was disappointing.

The tables that follow portray the performance of African Americans compared with Whites, Hispanics, and Asians.

Table 3. Average Prose, Document, and Quantitative Literacy Scores of Adults By Race

<u>Racial Group</u>	<u>Prose</u>	<u>Document</u>	<u>Quantitative</u>
White	288	282	297
African American	243	238	238
Hispanic	216	224	233
Asian	271	272	285

Source: U.S. Department of Education. National Center for Education Statistics. 2003 National Assessment of Adult Literacy.

Table 4. Percentage of Adults in Each Prose Literacy Level By Race

<u>Racial Group</u>	<u>Below Basic</u>	<u>Basic</u>	<u>Intermediate</u>	<u>Proficient</u>
White	7	25	51	17
African American	24	43	31	2
Hispanic	44	30	23	4
Asian	14	32	42	12

Source: U.S. Department of Education. National Center for Education Statistics. 2003 National Assessment of Adult Literacy.

Table 5. Average Prose, Document, and Quantitative Literacy of African Americans Vs U.S.

<u>Population</u>	<u>Prose Literacy</u>	<u>Document Literacy</u>	<u>Quantitative Literacy</u>
United States	275	271	283
African American	243	238	238

Source: U.S. Department of Education. National Center for Education Statistics. 2003 National Assessment of Adult Literacy.

Table 6. Average Prose, Document, and Quantitative Literacy Scores of African Americans By Highest Educational Attainment

<u>Highest Educational Level</u>	<u>Prose Literacy</u>	<u>Document Literacy</u>	<u>Quantitative Literacy</u>
Still in High School	236	241	227
Less Than High School	202	197	190
High School/GED	241	234	235
Some College/AA/AS	266	259	265
College Degree/Higher	280	272	280

Source: U.S. Department of Education. National Center for Education Statistics. 2003 National Assessment of Adult Literacy.

THE 2003 NAAL SAMPLE ASSESSMENT QUESTIONS

Participants in the 2003 NAAL assessment were asked to complete prose, document, and quantitative literacy tasks. The questions reflect what America's adults encounter in their lives.

The questions used in the 2003 NAAL were originally developed for the 1992 National Adult Literacy Survey (NALS). The sample questions that follow were used in the 2003 NAAL. The 2003 NAAL questions appear before the texts or documents needed to answer the questions.

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?

TWO 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 the White people.

High blood pressure, along with cigarette smoking, contributes greatly to the apparent increased

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

number of heart attacks among Black adults.

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

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.

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

Source: National Center for Education Statistics. 2003 National Assessment of Adult Literacy.

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...?					
	<u>Level of School</u>				
	Total	Elementary	Junior High	High School	
percent agreeing					
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. U.S. Department of Education. National Center for Education Statistics. 2003 National Assessment of Adult Literacy.

Quantitative Literacy Question

On March 9 you filled your car with gas. Calculate how many miles per gallon you car got since you filled it up with gas on March 2.

AUTOMOBILE MAINTENANCE RECORD

Month of March _____ 1992

Date	Mileage	Gasoline		Repairs	Oil and Grease
		No. Gals	Amount		
1					
2	42,775	13.1	19.10		
3					
4					
5					
6					
7					
8					
9	43,083	12.5	18.25		
10					
11					
12					

Source: U.S. Department of Education. National Center for Education Statistics. 2003 National Assessment of Adult Literacy.

FINDINGS FROM THE 2003 NAAL DATA

The 2003 NAAL didn't assess participants as illiterate versus illiterate. Rather, it assessed literacy as a continuum of skills that individuals possess at varying degrees. The analysis of the 2003 NAAL data portrayed the following information about the performance of African Americans:

- (1) The performance of African Americans was lower than that of Whites and Asians on all three literacy scales measured- prose, document, and quantitative.
- (2) The performance of African Americans was higher than that of Hispanics on all three literacy scales measured- prose, document, and quantitative.
- (3) The higher the educational level of African Americans, the higher their performance on all three literacy scales measured- prose, document, and quantitative.
- (4) The average scale scores of African Americans were below the national average on all three literacy scores measured- prose, document, and quantitative.

PRECAUTION ON MAKING INFERENCES WITH THE 2003 NAAL FINDINGS

Caution should be applied in making inferences with the findings from the 2003 NAAL data. NAAL only measured literacy in English language. America is developing into a multi-linguistic society. Therefore, many America's adults may be more literate in languages other than English. For example, some Hispanics and Asians may be more literate in Spanish and Asian languages respectively than in English.

The 2003 NAAL was not designed to measure literacy versus illiteracy. Rather, it measured the ability to maneuver through everyday kinds of printed and written tasks adults encounter in their daily lives. Such tasks may include filling out an application form, reading

drug prescription label, finding directions using a map, and extracting information from a graph or a table.

Although the 2003 NAAL administration utilized materials people may encounter in their lives, participants were required to work alone and without assistance. On the contrary, in real-life situations adults who encounter printed and written information in their daily lives may seek for help or ask for assistance from relatives, friends, or even strangers. NAAL assumed a hypothetical situation whereby adults will encounter and react to printed and written materials independently.

WHAT CAN POLICYMAKERS AND EDUCATORS DO?

Policymakers and educators need to embark on a number of policy measures that may help to improve the literacy performance of African American adults. These measures include, but not limited to:

First, policymakers and educators need to design strategies that will help to reduce the dropout rate of African Americans in k-16 education. As the 2003 NAAL data have shown, the higher the educational level of African American adults the better their performance on all three literacy scales- prose, document, and quantitative scales.

Second, African Americans should be exposed to challenging curricula in K12 education. Research studies have shown that students taking rigorous and challenging curricula, especially in high school, have a greater chance of going and graduating from college.

Third, African American adults should be encouraged to understand the importance of being proficient in English literacy. By and large, English language is the lingua franca of the United States. Therefore, being proficient in English language is a vehicle for partaking in the

American dream. Educators should endeavor to design literacy instructional strategies that take into cognizance the cultural background of African Americans and other minorities.

Fourth, continuing education programs that are real-life related should be organized for African Americans and other minorities as a means of improving their literacy skills. African American adults and other minorities who disproportionately drop out of K12 education should be targeted for GED. The 2003 NAAL data have shown that African Americans with GED outperformed those who dropped out of K12 and didn't complete GED.

Fifth, African American adults and other minorities should be encouraged to engage in lifelong learning. The demands of literacy skills in today's workplace require that employees engage in continuous improvement of their literacy skills. Those who don't may not be able to keep their jobs for long. Since literacy is a complex process, adults who are engaged in it for a long haul may become more proficient.

CONCLUSION

The 2003 NAAL data have confirmed what common sense has told us all along: that African Americans and other minorities are not as proficient in English literacy as Whites. Now is time for action to improve the English literacy skills of African American adults and other minorities in the United States. Bridging the disparity gap between African Americans and Whites in income, professional and social status, health, and civic engagement should have meaning when policymakers and educators begin to address the disparity in English literacy. Today is time for action. Tomorrow may be too late.

REFERENCES

- Comings, J., Reder, S., & Sum, A. (2001). Building a level playing field. Cambridge, MA: National Center for the Study of Adult Learning and Literacy.
- Hauser, R. M., Edley, C. F. Jr., Koenig, J. A., & Elliott, S. W. (Eds.). (2005). Measuring literacy: Performance levels for adults, Interim report. Washington, DC: National Academies Press.
- Kaestle, C. F., Campbell, A., Finn, J. D., Johnson, S. T., & Mikulecky, L. J. (2001). Adult literacy and education in America: Four studies based on the National Adult Literacy Survey. Washington, DC: U.S. Department of Education. National Center for Education Statistics.
- Kutner, M., Greenberg, E., & Baer, J. (2005). National Assessment of Adult Literacy (NAAL): A first look at the literacy of America's adults in the 21st Century. Washington, DC: U.S. Department of Education. National Center for Education Statistics.
- National Center for Education Statistics. (n.d.). Assessment questions: Real-world context. Retrieved February 7, 2008, from http://nces.ed.gov/naal/si_questions.asp
- National Center for Education Statistics. (2003). National Assessment of Adult Literacy: English background questionnaire. Washington, DC: Author.
- National Center for Education Statistics. (2003). The 2003 National Assessment of Adult Literacy (NAAL): Brochure. Washington, DC: Author.
- National Center for Education Statistics. (2005). Questions and answers: 2003 National Assessment of Adult Literacy. Retrieved January 31, 2008, from http://nces.ed.gov/naal/PDF/12_9_2005.pdf.

ProLiteracy. (2005). 2003 National Assessment of Adult Literacy. Retrieved February 4, 2008, from http://www.proliteracy.org/downloads/policy_update/ProLiteracy-Policy-Update_7.

White, S., & Dillow, S. (2005). Key concepts and features of the 2003 National Assessment of Adult Literacy. Washington, DC: U.S. Department of Education. National Center for Education Statistics.

White, S., & McCloskey, M. (2006). Framework for the 2003 National Assessment of Adult Literacy. Washington, DC: U.S. Department of Education. National Center for Education Statistics.