

**ESTIMATES OF ADULT LITERACY RATES
IN HARTFORD, CONNECTICUT**

Prepared for the City of Hartford

Task Force on Adult Literacy

by

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LITERACY: An individual's ability to read, write, and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one's goals, and develop one's knowledge and potential. (1991 National Literacy Act.)

Forty-one percent (41%) of the adults in the City of Hartford operate at the lowest level of literacy.

Seventy-three percent (73%) of the adults in the City of Hartford are in one of the two lowest literacy levels, out of five.

These figures, based on estimates derived by the National Institute for Literacy give the

most accurate and current picture of literacy levels on the local level. In the sections below, we discuss (1) the estimates of literacy level in more detail, (2) the characteristics of the Hartford population that form the basis for the estimates of literacy level, and (3) estimate the scope of the need for literacy services in Hartford.

(Unless otherwise indicated, the data for this report are taken from "The State of Literacy in America: Estimates at the Local, State, and National Levels," a 1998 report produced by the National Institute for Literacy, and from the 1990 United States Census.)

The National Adult Literacy Survey

In 1988, the Department of Education was directed to assess the literacy rate of American adults. The result of this effort, the 1993 National Adult Literacy Survey (NALS), represents the most recent and statistically accurate data on literacy in the United States. This research, which included interviews and testing of 26,000 adults, made several important contributions to our understanding and

measurement of literacy. First, the researchers broadened the definition of literacy to include not just the ability to read, but skills in problem solving and reasoning. Their study separately measured real-life skills in prose literacy, document literacy, and quantitative literacy. Second, the researchers saw literacy as more complex than a simple categorization of literate/illiterate. Instead, they differentiated between five levels of literacy, from level 1 (the lowest level) to 5 (the highest skill level).

The national survey showed that **21%--23% of adults in the nation are at the lowest level of literacy** –this is 40 to 44 million adults who cannot locate an intersection on a street map, locate two pieces of information in a sports article or provide background information on a social security card application. These individuals face difficulty using the skills that are considered necessary for every-day functioning. Individuals at **level 2** are able to compare and contrast information and distinguish relevant and irrelevant facts, but they are lacking higher level reading ability and problem-solving skills judged by the National Institute of Literacy as necessary for functioning in today’s economy and society. The table below shows the distribution of national data at each level of literacy:

Percent of persons in the nation at each literacy level:

Level	Prose	Document	Quantitative
1 (low)	21	23	22
2	27	28	25
3	32	31	31
4	17	15	17
5 (high)	3	3	4

Source: U.S. Department of Education, National Center for Education Statistics, National Adult Literacy Survey, September 1993.

This National Adult Literacy Survey was pivotal in turning attention to the problem of illiteracy in the nation, and to the serious consequences of illiteracy for individuals and communities. Local data, however, were not initially available, making it difficult to apply the findings of the study to local strategic planning. Then, in 1998, the National Institute for Literacy undertook a second project in which estimates of literacy levels in all cities with populations over 10,000, all congressional districts, and all counties in the nation were determined, using a statistical combination of data from the NALS and from the 1990 Census.

To derive these estimates, the researchers used detailed data from a sample of states and counties to identify 8 characteristics of a local community that are

significant predictors of literacy levels. The researchers then used Census data about these community characteristics in each local area in the country to make very accurate estimates of local literacy rates. **(Note that these factors should not be considered to be *causes* of literacy level in a community or of an individual's literacy level – such determinations are far more complicated than simply identifying community predictors.)** In this document, we discuss the eight factors that predict literacy level as they exist in Hartford.

Hartford Predictors of Literacy Level

The estimates of local literacy determined that 41% of the adults sixteen years of age and older in the City of Hartford operate at the lowest of the five literacy levels. This represents approximately 40,000 people, using the 1998 Hartford population figure of 96,823 in this age group.

73% of the adults – about 71,000 people -- are estimated to be at one of the two lowest literacy levels.

The average literacy score for Hartford adults is 233 points out of a possible 500 points. This average score falls into the second lowest literacy category, which includes scores between 226 and 275.

The table below presents the estimated percent of people at the lowest literacy level in the City of Hartford in 1990 and in the six other Connecticut cities that are determined by the State to be our “educational reference group” – districts that are similar in socioeconomic status, indicators of need, and school enrollment. This comparison shows the extreme nature of Hartford’s illiteracy problem.

Still, literacy problems are not unique to Hartford, Connecticut’s largest cities, or the State’s poorer communities. In all Connecticut towns some proportion of the population is estimated to have level 1 literacy. In an Appendix to this report, we have included a listing of these data for all Connecticut municipalities with a population of over 5,000.

Percent at lowest level of literacy, in seven Connecticut cities

Hartford	41%
Bridgeport	34%
New Haven	30%
New Britain	26%
Waterbury	25%
New London	20%
Windham	19%

Source: “The State of Literacy in America: Estimates at the Local, State, and National Levels” a 1998 publication of the National Institute for Literacy.

1. Educational Level

One of the factors found to contribute to literacy level is the educational attainment of adults in the community.

The 1990 Census found that 15% of adults 18 years of age and over in Hartford have less than a 9th grade education and another 23% have an educational level between 9th and 12th grade, without a high school diploma. An application of these percentages to the 1998 population of Hartford in this age category (93,230) gives an indication of the current magnitude of need for literacy education that this factor alone indicates -- it is estimated that nearly 35,500 adults have less than the critical high school degree.

Educational Level (18+ yrs of age)	% in 1990	Estimated Number of People in 1998*
Less than 9 th grade	15%	13,984
9th-12th grades, no diploma	23%	21,443
High school/GED	29%	27,037
Some college or higher	33%	30,766

* based on the 1998 Hartford population 18+ years of age: 93,230

Although not a factor in the NALS, the drop out rate in Hartford schools is a further educational factor that helps show the magnitude of need for literacy training of young adults. In the 1998-99 school year, approximately 12% of the 9th-12th graders dropped out of school. (11% did so in the 1997-98 school year, and 23% in the 1995-1996 school year.)

The drop-out rate accumulates to a point where 45.6% of the students in the high school class of 1999 dropped out of school before that class graduated. (51% in the 1998 high school class had dropped out by graduation.) (1999-2000 and 1998-1999 Strategic School Profiles for the Hartford School District)

English Proficiency

Competency in English in a community is a second factor that predicts its literacy level.

According to the 1990 Census, ten percent (10%) of the Hartford adult population 18 years of age and over reported a low level of English proficiency, saying that they spoke English “not well” or “not at all.” This figure, applied to the 1998 population in this age category shows the need of people for training in the most basic English language skills -- approximately 9,323 adults in Hartford would benefit from such educational opportunities.

English Proficiency (18+ yrs of age)	% in 1990	Estimated Number of People in 1998*
Speak English very well	81%	75,516
Speak English well	9%	8,391
Speak English not well or not at all:	10%	9,323

* based on the 1998 Hartford population 18+ years of age: 93,230

In Hartford, according to the 1990 Census, thirty-seven percent (37%) of the adult population reported that they speak a language other than English in their home. Among these, Spanish is the most common language (66%). Of these Spanish-speakers, 30% or about 7,450 people report that they speak English “not well” or “not at all.”

In the 1999-2000 school year, 57.3% of the Hartford students between Kindergarten and 12th grade lived in a home where English was not the home language. (1999-2000 Strategic School Profile for the Hartford School District)

Race/Ethnicity

At the time of the 1990 Census, 40% of the Hartford adults were White and 39% were Black. The National Adult Literacy Survey found that the proportion of African-Americans in a community is one of the predictors of lower literacy levels.

Hispanic origin, which is a different variable from race in the Census, is not included as a separate factor in these estimates of literacy level because the variables language proficiency (discussed above) and immigration rate were found to capture what Hispanic origin “means” in terms of predicting literacy rate.

As noted earlier, factors included in these estimates are predictors of literacy levels in the city; they are not “causes” of the literacy level of a community or individual. And, accordingly, racial composition and ethnic origin are of limited use for planning literacy education.

Still, the prevalence of Hispanics has shaped the priorities of adult and family literacy programs in Hartford. In 1990, 31% of the Hartford population (26% of those 16 years of age and older) were Hispanic in origin. (This figure includes people who identify with a variety of racial categories.) In the Hartford 1990 Hispanic population, a large majority (87%) were Puerto Rican; about 13% were from outside the country. As noted above, the predominance of Spanish as the language of non-English speakers has meant that literacy training in Hartford is tightly interwoven with the need for English language training and for classes taught in Spanish.

In the Hartford schools, according to the 1999-2000 Strategic School Profile, 53% of the students are Hispanic and 41% are Black.

1. Recent Immigration

Another factor that was found to be significant in the prediction of local literacy levels is the immigration rate in an area. In Hartford, 4% of the population – about 5,584 people – were foreign-born and came to Hartford in the five years before the 1990 Census. The researchers found that higher immigration rates predict a lower literacy level in an area.

1. Labor Force Status

The civilian employment rate is a further predictor of a local area's literacy level in that a higher proportion of people employed, as opposed to not being in the labor force, raises the predicted literacy rate in an area.

Labor Force Status (16+ yrs of age)	% in 1990	Estimated Number of People in 1998*
Employed	54%	52,285
Unemployed	6%	5,809
Not in the Labor Force	40%	38,729

*based on the 1998 Hartford population 16+ years of age: 96,823

1. Occupation

Higher proportions of people employed in the categories of professional, technical, managerial and in sales and administrative assistants lead to higher predicted literacy rates in an area. In Hartford, according to the 1990 Census, the distribution of occupations among the 54% in the labor force was as follows:

Occupation of Those Employed	% in 1990	Estimated Number of People in 1998*
Prof, technical managerial	24%	12,548
Sales, admin asst	30%	15,686
Service	29%	15,163
Laborer	17%	8,888

* based on the estimated number of people 16+ years of age employed in 1998: 52,285

1. Weeks Worked

The number of weeks worked in the previous year was found to have very little effect after employment rate was taken into account, but it did play a

role in predicting literacy levels. The proportion of people that worked between 1 and 13 weeks of the previous year (as opposed to not working at all) had a small effect on raising the predicted average literacy score.

In Hartford, 35% of the population did not work at all during the year previous to the 1990 Census, and 7% worked between 1 and 13 weeks.

1. **Work Disability**

The higher the rate of work disability in an area, the lower the predicted literacy level. Thirteen percent (13%) of the Hartford population was found in the 1990 Census to have a work disability.

The characteristics of Hartford adults according to these eight Census variables, weighted as determined by the NALS statistical model, combine to form the estimates of Hartford literacy levels. There is currently no better method and no more recent figures by which to make these estimates.

The 2000 Census will provide us with more up-to-date information about Hartford residents, but another statistical model with new data on literacy must be developed at that point to ascertain the weight to be assigned the various characteristics of the population found to predict literacy rate.

In this report, we have applied the percentage distribution of the 1990 predictors of literacy to more recent 1998 data in order to derive more current estimates of the magnitude of Hartford's literacy problem. (So, for example, the Census finding that 15% of those 18 years of age and older in 1990 had less than a 9th grade education was used to estimate that 13,984, 15% of the 1998 population of 93,230 had this educational level.) The risk of error in these estimates, of course, is dependent on the extent to which the distribution of these variables has changed over the eight years, and the extent to which the relationship between these variables and the rate of literacy has changed.

Summary of the Scope of Need for Literacy Education in Hartford

As noted, the most statistically sound and direct estimate of the scope of need for literacy education in Hartford is based on the NALS data, which, when applied to

the 1998 population, shows that approximately 71,000 people are at one of the two lowest levels of literacy -- 40,000 at the lowest level and another 31,000 at level two.

Two educational components of the NALS model add information about who some of the people in these group are likely to be: According to the 1998 estimates presented here, nearly 36,000 adults in Hartford have less than a high school degree. Approximately 9,000 adults in Hartford would benefit from basic English language training. (These two groups may, of course, overlap.)

The most recent Hartford Strategic School Profile provides the information that 9.4% of the adults without a high school diploma were enrolled in adult education in 1998-1999. Thus it is clear that only a small proportion of the 71,000 people in need of literacy education are currently receiving such services.

**PERCENT OF ADULT POPULATION AT LEVEL 1 LITERACY
IN CONNECTICUT MUNICIPALITIES
(POPULATION OF 5,000 AND OVER)**

MUNICIPALITY	%
CONNECTICUT STATE	16%
Ansonia city	18%
Avon town	9%
Berlin town	11%
Bethel town	10%
Bloomfield town	25%
Branford town	11%
Bridgeport city	34%
Bristol city	14%
Brookfield town	8%
Burlington town	6%
Canton town	9%
Central Manchester CDP	13%
Cheshire town	12%
Clinton town	8%
Colchester town	10%
Conning Towers-Nautilus Park CDP	13%
Coventry town	7%
Cromwell town	12%
Danbury city	19%
Darien town	11%
Derby city	17%
East Haddam town	9%
East Hampton town	7%
East Hartford town	18%

MUNICIPALITY	%
East Haven town	15%
East Lyme town	11%
East Windsor town	12%
Ellington town	8%
Enfield town	12%
Fairfield town	12%
Farmington town	10%
Glastonbury town	10%
Granby town	7%
Greenwich town	14%
Griswold town	13%
Groton town	12%
Guilford town	6%
Haddam town	8%
Hamden town	14%
HARTFORD city	41%
Hebron town	6%
Killingly town	15%
Ledyard town	7%
Madison town	11%
Manchester town	12%
Mansfield town	8%
Meriden city	18%
Middletown city	16%
Milford city	11%

Monroe town	9%
MUNICIPALITY	%
Montville town	12%
Naugatuck town	14%
New Britain city	26%
New Canaan town	10%
New Fairfield town	8%
New Haven city	30%
New London city	20%
New Milford town	8%
Newington town	15%
Newtown town	9%
North Branford town	7%
North Haven CDP	12%
North Haven town	12%
Norwalk city	19%
Norwich city	17%
Old Lyme town	10%
Orange town	12%
Oxford town	7%
Plainfield town	14%
Plainville town	14%
Plymouth town	12%
Portland town	12%
Prospect town	12%
Redding town	7%
Ridgefield town	8%
Rocky Hill town	12%
Seymour town	12%
Shelton city	11%
Simsbury town	8%

Somers town	15%
South Windsor town	8%
Southbury town	18%
MUNICIPALITY	%
Southington town	11%
Stafford town	13%
Stamford city	21%
Stonington	13%
Storrs CDP	9%
Stratford town	17%
Suffield town	11%
Thomaston town	9%
Tollandtown	5%
Torrington city	15%
Trumbull town	13%
Vernon town	11%
Wallingford Center CDP	15%
Wallingford town	12%
Waterbury city	25%
Waterford town	13%
Watertown town	13%
West Hartford town	15%
West Haven city	18%
Weston town	9%
Westport town	9%
Wethersfield town	18%
Willimantic CDP	20%
Wilton town	9%
Winchester town	13%
Windham town	19%

Windsor Locks town	12%
Windsor town	18%
Wolcott town	11%

Woodbridge town	8%
Woodbury	9%

"The State of Literacy in America: Estimates at the Local, State, and National Levels," produced by the National Institute for Literacy, Washington D.C. (1998) Refer to <http://www.nifl.gov> for further information.

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The 1990 United States Census, Database C90STF3A
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