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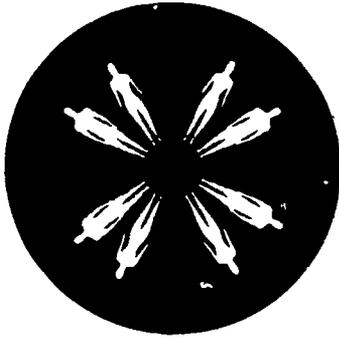
ABSTRACT

Data from the Mature Women's cohort of the National Longitudinal Surveys were used in an analysis of the acquisition of education and training by women at later ages over the 1979-89 period. These data described a sample of women who were between the ages of 30 and 45 in 1967 and who had been interviewed regularly at later intervals. Between the years of 1979 and 1989, the survey collected information about the occurrence and duration of all education and training programs. This analysis examined the extent of participation in education and training programs among this group of women from 1979-1989, a time in which they aged from 42-57 to 52-67. The time spent in education and training, as measured by total hours involved in these programs, was also analyzed. In addition, reasons why these women participated in programs outside of college education and company training over the 1984-89 period were addressed. Over 40 percent of women were found to have participated in some education or training program during the 11-year period. The primary forms of instruction were company training and college courses. White women more likely had some education or training than other women, but among program participants, other women spent more time in these programs than white women. Evidence on instructional programs other than company training and college education indicated that over one-third of the women participated in these programs for job-related reasons. (YLB)

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# Work and Family: Never Too Old To Learn



Data from the National Longitudinal Surveys

U.S. Department of Labor  
Bureau of Labor Statistics

Report 856  
September 1993

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This issue of *Work and Family* analyzes the acquisition of education and training by women at later ages over the 1979-89 period. Over 40 percent of women aged 42-57 in 1979 participated in some education or training program during the 11-year period. The primary forms of instruction were company training and college courses. White women more likely had some education or training than other women, but among program participants, other women spent more time in these programs than white women. Evidence on instructional programs other than company training and college education during the 1984-89 period indicates that over a third of the women participated in these programs for job-related reasons.

## Overview

Investments in education and training are commonly thought to be important factors in increasing an individual's earnings. Since investments in human capital tend to make workers more productive, recipients of education and training should experience greater earnings growth than nonrecipients. Along with increased earnings, those who invest in human capital may experience greater job satisfaction and have an increased appreciation for other activities.

Human capital investments also involve costs that may be recouped over time. These costs include the direct expenses of education and training programs, foregone earnings during the investment period, as well as psychic costs since some forms of education and training are difficult or tedious. The costs are usually incurred over a short period of time, while the benefits can accrue over a lifetime. For this reason, the human capital model directly implies that individuals with a longer worklife ahead of them will invest more in human capital. Hence, one would expect most education and training to occur at younger ages.<sup>1</sup>

Even if younger persons are more likely to invest in training and education, however, human capital investments may play an important role in improving the economic

condition of older individuals. In particular, older women often have low incomes due to being separated, divorced, or widowed. Many of these women may also have dropped out of the labor force in the past to have children, and some of their work skills may have deteriorated over time. Additional training may enhance the productivity of these women by providing them with up-to-date skills and may also result in increased earnings.

Pursuing education and training for economic reasons might make sense for many older women, but they might engage in these activities simply to satisfy their nonwork interests and for personal development. Little is known about the extent to which older individuals acquire education and training or the reasons why they participate in instructional programs. This information gap exists because there has been a lack of comprehensive and representative data on the human capital investments of individuals who are beyond the usual schooling age.

This report draws on data from the Mature Women's cohort of the National Longitudinal Surveys (NLS). These data describe a sample of women who were between the ages of 30 and 45 in 1967 and who have been interviewed regularly since. Between the years of 1979 and 1989, the survey collected information about the occurrence and duration of all education and training programs. These programs include college education, company training, proprietary institutions (vocational and business schools, nursing schools, correspondence courses), regular schools (high schools, night schools, community colleges), and other forms of schooling and training. Only formal education and training are measured; the extent of informal education or training is not captured. Between 1984 and 1989, the survey asked women in the Mature Women's cohort why they decided to participate in educational and training programs other than company training and college education.

This analysis examines the extent of participation in education and training programs among this group of women from 1979 to 1989, a time in which they aged from 42-57 to 52-67. The time spent in education and training, as measured by total hours involved in these programs, is also analyzed. In

<sup>1</sup> For a discussion on calculating the present value of the benefits and costs of human capital investments, see Ronald G. Ehrenberg and Robert S. Smith, *Modern Labor Economics* (Scott, Foresman and Company, 1988).

**Table 1. Receipt of training and education, 1979-89, among women aged 42-57 in 1979**  
(in percent)

Characteristics	Any training or education	Company training	College education	Proprietary institution	Regular school	Other
<b>Total</b> .....	40.9	24.4	15.0	6.4	11.0	8.7
<b>Race</b>						
White .....	41.7	24.5	15.6	6.8	11.3	8.8
Other .....	34.0	24.1	10.1	3.8	7.8	8.0
<b>Education prior to 1979</b>						
Less than high school .....	17.7	9.4	2.7	3.1	5.1	3.3
High school graduate .....	38.9	23.5	10.4	6.3	10.2	6.8
Some college .....	62.6	38.4	27.2	11.9	15.5	16.1
College graduate .....	77.8	46.7	48.5	8.3	21.5	20.8
<b>Weeks worked 1979-89</b>						
0 .....	10.5	0	3.5	1.8	4.3	3.3
1-199 .....	43.3	26.4	16.3	6.1	11.6	9.0
200-399 .....	50.1	31.9	16.6	8.4	12.8	9.6
400 or more .....	57.2	37.2	22.5	10.0	14.5	12.7
<b>Marital status in 1979 and in 1989</b>						
Married/Married .....	40.4	22.7	14.9	6.2	11.6	8.3
Married/Single .....	36.0	21.3	10.1	7.4	9.7	9.4
Single/Married .....	45.5	22.1	20.9	4.9	13.3	18.3
Single/Single .....	44.6	31.7	17.5	6.8	9.3	8.3

Note: Individual percentages can add up to more than total because some individuals participated in more than one program.

Source: National Longitudinal Survey of Mature Women

addition, this report addresses reasons why these women participated in programs outside of college education and company training over the 1984-89 period.

### Receipt of education and training

Table 1 provides figures on the receipt of education and training by a number of individual characteristics, such as race, education prior to 1979, weeks worked over the 1979-89 period, and changes in marital status over the time frame. Over 40 percent of these women received some form of education or training. The primary source of these human capital investments was company training; close to a quarter (24.4 percent) of the women received training from their employer. About 1 in 7 women (15 percent) attended college, while 11 percent attended some form of regular school. Proprietary institutions were the least common form of training; only 6.4 percent of women participated in these programs.

White women were more likely to take part in some education or training program than women of other races. However, there is no significant difference between white women and other women in the likelihood of receiving company training, as close to 25 percent of each of these groups received employer-provided training. White women were more likely to participate in all the other forms of off-the-job training and education programs.

There appears to be a strong, positive relationship between

education prior to 1979 and human capital investment over the 1979-89 period. This direct relationship holds for nearly every category of education and training. While less than one-fifth (17.7 percent) of high school dropouts participated in some type of program, over three-quarters (77.8 percent) of college graduates received additional schooling or training. Nearly half (46.7 percent) of women college graduates received company training, and about half (48.5 percent) attended additional college courses.<sup>2</sup> Also, over a fifth (21.5 percent) of the college graduates attended courses at a regular school.

A positive relationship also appears to exist between weeks worked over the 1979-89 period and human capital investment. This result for company training may be partially due to the fact that those who spend more time working have more opportunities to receive training. The direct relationship between weeks worked and the other programs may indicate work-related returns to these investments in human capital.

There are no distinctive patterns in the receipt of education and training and changes in marital status. However, nearly a third (31.7 percent) of those who were single in both 1979 and 1989 received company training, which is more than any other group.

<sup>2</sup> There is also a positive relationship between education and the receipt of company training among younger individuals. See *Work and Family: Employer-Provided Training Among Young Adults*, U.S. Department of Labor, Bureau of Labor Statistics, Report 838, February 1993.

**Table 2. Average hours of training and education received among those who received training or education, 1979-89, for women aged 42-57 in 1979 (in percent)**

Characteristics	Any training or education	Company training	College education	Proprietary institution	Regular school	Other
<b>Total</b> .....	374.5	176.2	539.6	149.3	84.4	118.1
<b>Race</b>						
White .....	365.9	168.6	528.3	144.0	81.1	115.0
Other .....	459.7	238.8	681.0	226.7	124.3	146.2
<b>Education prior to 1979</b>						
Less than high school .....	298.1	257.3	565.0	242.3	86.0	93.2
High school graduate .....	273.8	161.7	424.0	144.8	85.0	96.3
Some college .....	538.3	213.6	774.2	153.8	64.0	101.2
College graduate .....	464.8	130.4	488.2	72.3	99.7	172.6
<b>Weeks worked 1979-89</b>						
0 .....	252.3	0	430.7	226.5	37.4	173.9
1-199 .....	341.6	185.3	448.7	132.7	79.3	96.1
200-399 .....	435.2	169.3	727.7	194.2	105.2	141.1
400 or more .....	393.5	168.6	547.0	114.7	87.7	118.7
<b>Marital status in 1979 and in 1989</b>						
Married/Married .....	322.4	166.1	449.7	125.3	77.2	106.3
Married/Single .....	404.7	161.7	794.1	192.6	62.5	117.0
Single/Married .....	419.1	220.8	434.3	311.2	58.8	154.3
Single/Single .....	504.0	200.8	713.4	173.4	132.6	145.0

Source: National Longitudinal Survey of Mature Women

### Amount of education and training received

Table 2 shows the amount of education and training received by those who participated in these programs. Women in this age group who received training or education spent, on average, about 375 hours in these instructional programs. Women who attended college spent the most time engaged in formal programs, nearly 540 hours over the 1979-89 period on average. Employer-provided training was the second lengthiest type of program; company training recipients averaged about 176 hours in this form of training. Participants in regular school averaged about 84 hours in these programs, which is fewer than any of the other forms of training.

There is substantial variation in total hours spent in training and education by race. Although white women were more likely to participate in instructional programs, among participants, other women spent more time in these programs. In particular, white women spent on average about 95 fewer hours in programs than other women. A strong racial differential holds true for all types of education and training programs.

Even though time spent in instructional programs does not correlate positively with educational level, those with more than a high school degree spent more hours in human capital investment than those with a high school education or less. Those with some college (13-15 years of school) spent a considerable amount of time (774 hours) in college courses, possibly in an attempt to complete their college degree.

There are no strong patterns between time spent in

education and training programs and weeks worked or changes in marital status. Those who worked 200 weeks or more from 1979 to 1989 spent more hours in training than those who worked fewer than 200 weeks. Also, women who were single in both time periods spent more time in these programs than did other women.

### Reasons for training or schooling enrollment

Why do women participate in training or education programs at later ages? Certainly, the decision to get training on the job may stem from a desire to advance in a career or earn more money. Similarly, these women may pursue other types of education and training to enhance earnings, or such women may have other reasons such as the satisfaction associated with completing an advanced degree, personal interest, or simply to relieve boredom. A firm obviously plays a major role in determining whether or not a worker receives employer-provided training.

Table 3 provides insight into why older women enroll in certain types of education and training programs. The programs examined include all types of training and education other than company training or college education over the 1984-89 period.<sup>3</sup> For women who participated in more than one program, the data refer to the most recent training event.

<sup>3</sup> These reasons were generated from the responses to the question, "Why did you decide to take this program?" where the program referred to training other than company training and college education.

**Table 3. Reasons for enrolling in a training program (excluding company training and college education), 1984-89, for women aged 42-57 in 1979**  
(in percent)

Why did you decide to take this program?	All	Proprietary institution	Regular school	Other
<b>Work-related reasons</b> .....	35.9	51.8	34.3	26.0
To obtain work .....	5.2	8.0	2.8	3.8
To improve current job situation .....	28.4	38.6	27.4	22.1
To get better job .....	2.3	5.2	4.1	.1
<b>Nonwork-related reasons</b> ..	45.7	24.4	56.8	48.9
Had extra time; bored staying at home .....	.4	0	.5	.5
To improve basic skills like reading, writing, or arithmetic .....	2.6	1.4	4.0	1.7
For general education, general knowledge .....	12.7	11.7	18.2	7.7
For personal development, pleasure, or interest .....	30.0	11.3	34.1	39.0
<b>Other reasons</b> .....	18.4	23.8	8.9	25.1

Note: For individuals who participated in multiple programs, the response is for the most recent program.

Source: National Longitudinal Survey of Mature Women

Table 3 indicates that nearly half (45.7 percent) of the older women participated in training programs for nonwork-related reasons, such as personal development, pleasure, or interest (30 percent); or for general education or knowledge (12.7 percent). Less than 1 percent of women attended training programs because they were bored staying at home. Still, over a third (35.9 percent) of these women participated in various forms of off-the-job training for job-related reasons. A large percentage participated in these programs in order to improve their current job situation (28.4 percent), while others did so to obtain work (5.2 percent), or to get a better job (2.3 percent).

The majority of women (51.8 percent) who received

training from proprietary institutions did so for work-related reasons: 38.6 percent wanted to improve their current job situation, 8 percent hoped to obtain work, and 5.2 percent thought they might get a better job by receiving training through a proprietary institute. Conversely, most women (56.8 percent) who attended a regular school did so for reasons not related to work: 34.1 percent attended for personal development, pleasure, or interest; 18.2 percent participated for general education or knowledge. Still, over a third (34.3 percent) attended regular school for reasons relating to work. Hence, even among women at later ages, a large percent attends training programs to improve their status in the labor market.

## Technical Note

Data in this report are from the National Longitudinal Surveys (NLS) which are sponsored by the Bureau of Labor Statistics (BLS). The Bureau contracts with the Center for Human Resource Research of The Ohio State University to manage the surveys and provide user services. The NLS were begun in the mid-1960's with the drawing of four samples: Young Men who were 14-24 years old as of April 1, 1966, Young Women who were 14-24 years old as of January 1, 1968, Older Men who were 45-59 years old as of April 1, 1966, and Mature Women who were 30-44 years old as of April 1, 1967. Each sample originally had about 5,000 individuals with oversamples of blacks. In the early 1980's, the Young Men and Older Men surveys were discontinued. The two women's surveys continue and are currently collected every 2 years. The Bureau of the Census collects the data for BLS.

In 1979, a new cohort was begun with a sample of over 12,000 young men and women who were 14-21 years of age as of January 1, 1979. It includes oversamples of blacks, Hispanics, economically disadvantaged whites, and youth in the military. The military oversample was discontinued after the 1984 survey, and the economically disadvantaged white oversample was discontinued after the 1990 survey. This survey is called the Youth cohort, and the cohort members have been interviewed every year since it began.

The data collection for the Youth cohort is undertaken by NORC (National Opinion Research Center), a social science research center affiliated with the University of Chicago.

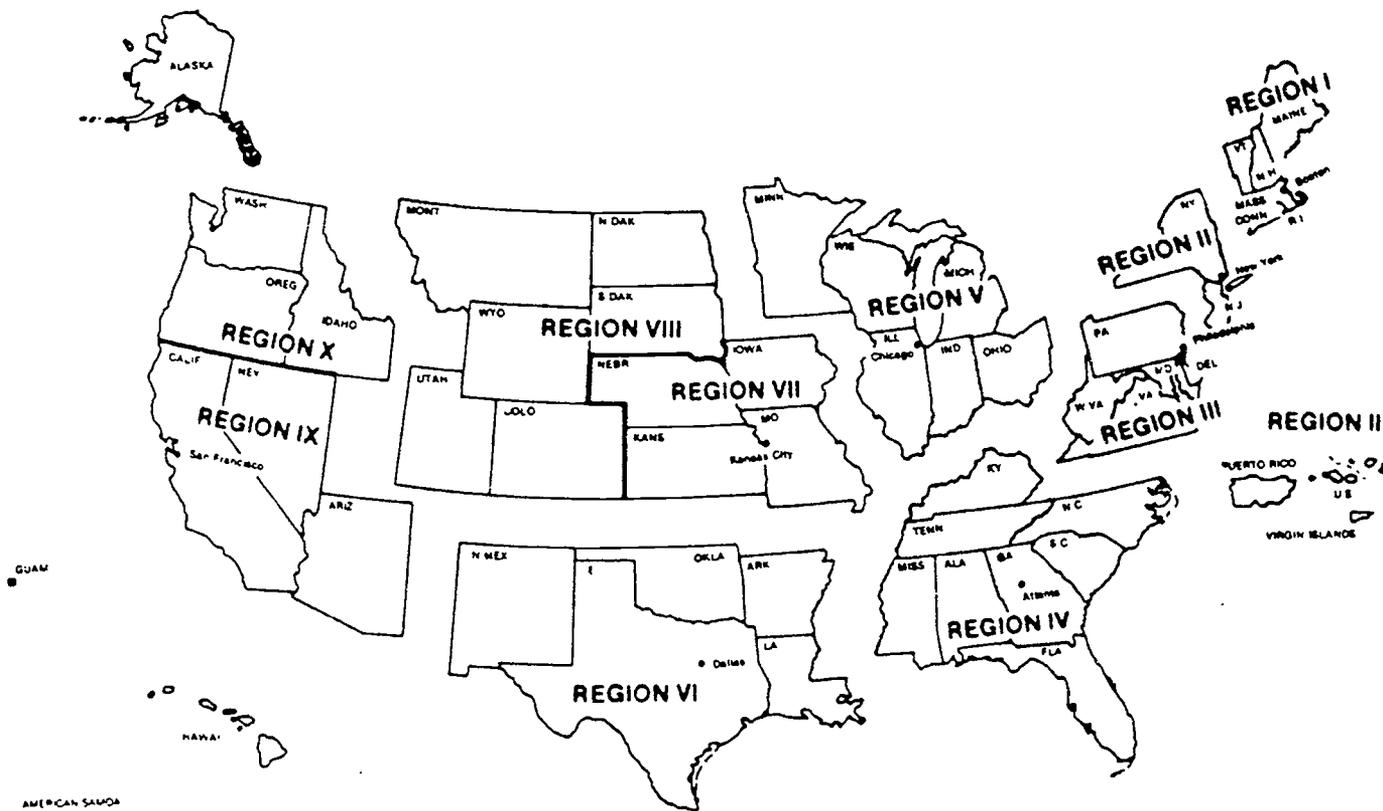
The data in this report are weighted so that the sample is representative of the age group studied. The sample includes those individuals who were respondents in 1989, and the 1989 sample weight is used. All inferences that are discussed in the text are statistically significant at the 90-percent confidence level. Due to sampling variability, small differences that are not discussed in the text should be interpreted with caution.

For a detailed explanation of the NLS, see *NLS Handbook 1993* (Center for Human Resource Research, The Ohio State University). For information about the NLS, or to be placed on a mailing list for this publication, write to National Longitudinal Surveys, Bureau of Labor Statistics, Office of Research and Evaluation, 2 Massachusetts Ave., NE., Room 4915, Washington, DC 20212-0001, or call (202) 606-7405.

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