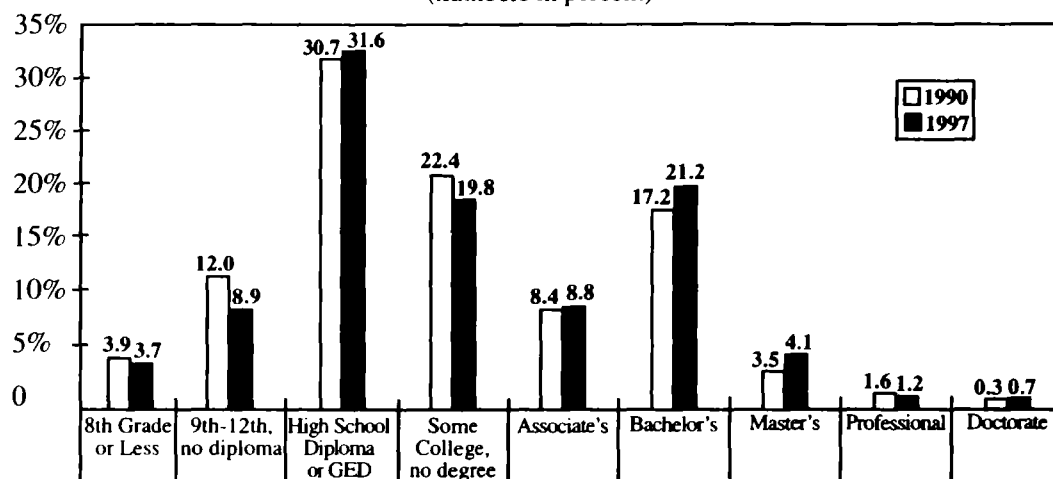


**Figure 1-3: Highest Level of Educational Attainment of 25-34 Year-Olds,
March/April 1990 and March 1997**

(numbers in percent)



SOURCE: CLMS from 1990 Census of Population and Housing and March 1997 Current Population Survey.

**Figure 1-4: Comparisons of Selected Aspects of the Educational Attainment
of 25-34 Year-Olds in 1990 and 1997**

(numbers in percent)

Educational Attainment	1990	1997	Change
No High School Diploma or GED	15.9	12.6	- 3.3
"Forgotten Half" (12 or fewer years)	46.6	44.2	- 2.4
One or More Years Postsecondary Education	53.4	55.8	+2.4
Bachelor's Degree or Higher	22.6	27.2	+4.6

SOURCE: CLMS from 1990 Census of Population and Housing Public Use Microdata Files and March 1997 Current Population Survey.

that "everybody in America goes to college" is hardly accurate. While more Americans than ever — and a rising proportion of new high school graduates — do pursue some postsecondary education, less than 24 percent of adults age 25 or older (and 32 percent of high school graduates ages 25-29) have earned a bachelor's or higher degree.

Educational attainment varies by gender, race and ethnicity. Among the population ages 25-29 in 1997, women completed high school at 3.1 percentage points greater than men (88.9 versus 85.8 percent). They also earned bachelor's degrees at three percentage points higher than men (29.3 versus 26.3 percent). In the same age group, black and white high school graduation rates have about equalized (86.2 versus 87.6 percent, respectively). The Hispanic high school graduation rate lagged further behind, at 61.8 percent.

With regard to bachelor's or higher degrees, however, wide gaps in attainment remain for those age 25 and over: whites 24.6 percent, blacks 13.3 percent, and most notably, Asians and Pacific Islanders 42.2. One-half of 25-29 year-old Asians had earned a bachelor's degree compared with one in three whites, about one in seven blacks and only one in ten Latinos.

Despite scattered gains, educational attainment in the United States continues to be heavily influenced by family income. As Paul Barton of the Educational Testing Service has documented, high school graduation rates of students in the lowest income quartile (67 percent) are more than 25 percent lower than the graduation rates of students in the highest quartile (94

Still Losing Ground

percent). Thirty-four percent of high school graduates from low-income families went directly to college in the next school year versus 83.4 percent of those from high-income families. Similarly, despite the availability of many federal, state, local and private higher education financial assistance programs, a student from the top family income quartile is far more likely to earn a postsecondary education degree than a student from the bottom income quartile. (See discussion in Chapter Six.)

The nation's challenges for the next decade are to remove this family income bias, to further raise educational attainment, and to increase the academic achievement of all students, especially in literacy and numeracy. No less a challenge is converting that enhanced achievement into higher productivity for the economy and substantially higher earnings for American workers who possess the requisite skills and personal attributes.

These several challenges are the focus of Chapters Five to Seven. Sadly, as we shall document, young people's collective increase in years of formal educational study has not been universally rewarded with higher earnings. In fact, according to the research of Larry Mishel of the Economic Policy Institute, *even young men and women with a baccalaureate degree and one to five years of work experience earned, in real terms, seven percent less in 1997 than in 1989.*

THE COMING YOUTH POPULATION BOOM

Between 1981 and 1995, the number of young American adults, ages 18-24, declined

sharply, from 30.2 to 24.9 million, a fall of almost 18 percent. However, beginning in 1996 that trend of declining numbers began to reverse. The Center for Labor Market Studies foresees the number of 18-24 year-olds rising from 24.7 million in 1996 to 27.1 million in 2000 and 29.1 million in 2005. (To add perspective, in November 1998, 18-24 year-olds will constitute one-eighth of the United States' voting-age population.) According to the U.S. Census Bureau's "middle level projection series," this age cohort should increase by 21 percent from 1995 to 2010. (In fact, given higher-than-projected immigration, both legal and illegal, that projection may well be understated. About six percent of the nation's 18-24 year-olds have entered the U.S. since 1990 and perhaps one-quarter of these new immigrants have serious educational deficits.)

Given the vexing interrelated problems of the nation's many dysfunctional high schools and juvenile and adolescent crime, the increase in numbers of high school students (ages 16+), reflecting the aging of the mini-baby boom generation (those born between 1975 and 1989), is also worthy of attention. In 1990, there were 6.38 million high school students age 16 and older. By 1997, there were 7.94 million, an increase of over 20 percent. (Perhaps 200,000 of this increase can be attributed to the Census Bureau's recognition in 1994 that it had underestimated foreign immigration in the 1990 Census.)

This substantial impending growth of young adults has many implications, some of which this report will explore. With a growth rate of 21 percent, compared with a non-elderly population

expansion of only 15 percent, inescapable questions arise: Will the American labor market be able to absorb the young adults entering the pipeline? Will they have the skills to function effectively in the new economy? Will they earn enough to support a decent standard of living for themselves, their families and their children?

Also, as has become increasingly clear, the growing young adult population will be substantially different from its predecessors in a number of key respects. People of color will comprise a much larger fraction of the workforce. The "white majority," which in 1995 comprised 68 percent of all young adults, will decline in 2010 to 62.6 percent or less. Over this same 15-year period, the number of African American young adults is projected to increase 23 percent, Asians and American Indians 56 percent, Hispanics 57 percent and white, non-Hispanics only 11 percent.

America's pronounced racial, linguistic and ethnic diversity will only increase. The implications of this fact for the workforce, for social harmony and for national cohesion will challenge the best minds and talents of our times, as they already are doing on issues of immigration, affirmative action and bilingual education.

A MORE PAINFUL TRANSITION TO THE LABOR MARKET

In 1997, about nine percent of 16-19 year-olds were neither enrolled in school nor working, down from 11 percent in 1985. Fourteen percent of all these so-called "detached youth" were black

or Hispanic and eight percent were white. Black "detached youth" had declined from 18 percent in 1985 to 14 percent in 1997.

Annette Bernhardt and her colleagues studied two cohorts of young white men, the first from 1966-1981, the more recent from 1979-1994. According to their principal findings, based on National Longitudinal Surveys:

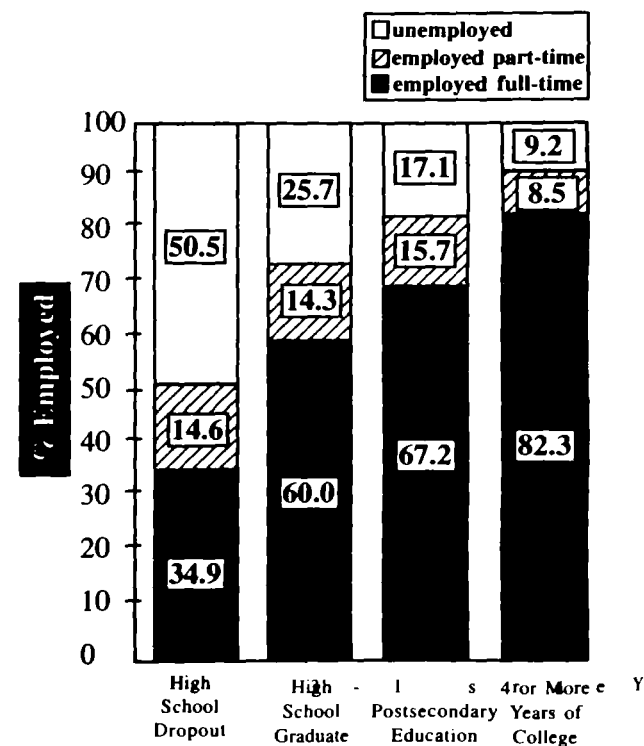
(1) the transition to permanent employment is taking longer; (2) young workers who do not go on to college, especially high school dropouts, are more likely to experience periods of unemployment and to rely on part-time jobs for a greater number of years; (3) those attending college are more likely to work while enrolled and to draw out their studies. Further, 30 year-olds who were employed for two or more years in a full-time, year-round job constituted 63 percent of the earlier cohort versus only 56 percent of the more recent cohort. Young male workers were less likely to make a single transition to the labor market than to move back and forth between work, unemployment and formal enrollment in education. Job instability increased markedly during the 1980s and 1990s; youth worked for more employers and had shorter tenures with one employer.* Compared to the past, young workers in recent years also experienced significantly lower permanent wage growth. "It is not so much that more educated workers are doing better, but that less educated workers are doing worse." Bernhardt et al conclude:

A new generation is entering a transformed labor market, and especially for those without a college degree, the prospects for a living wage, stable employment, and upward mobility are not at all guaranteed. Our evidence suggests that entry into the workforce and career development have become more volatile processes, and in particular, job instability has increased. Partly as a consequence, long-term wage growth during these key years has been hit on two fronts — it has stagnated and become more unequal. To the extent that wage growth represents upward mobility, it is clear that the prospects for such mobility have deteriorated in recent years. Those without a four-year college degree have clearly gotten hit the hardest, and this represents the majority of workers. But workers higher up the skill and education ladder have also experienced growing inequality and job instability within their ranks...Absent a dramatic shift in the American economy, the net result is that the recent cohort can expect lower and more unequal lifetime wage growth than their predecessors.

As we shall see, what Bernhardt and her colleagues found for white young adults applies with far greater force for young workers of color.

More Education = More Employment

Figure 1-5: Employment and Unemployment Rates of 16-24 Year-Old Youth by Highest Level of Educational Attainment, 1997
(numbers in percent)



SOURCE: CLMS based on monthly Current Population Surveys, 1997.

* A 1998 Bureau of Labor Statistics survey of almost ten thousand persons found that a typical worker holds 8.6 different jobs between ages 18 and 32.

JOBS FOR OUT-OF-SCHOOL YOUTH

Among the most persistent problems in the American economy for many years have been the high youth unemployment rates and relatively low rates of full-time work by America's out-of-school 16-24 year-olds. In 1996, for example, the official national unemployment rate was 5.4 percent. In 1997, it had fallen to 4.9 percent and in August 1998 to 4.5 percent. In sharp contrast, the 1997 unemployment rate for males ages 16-24 was 11.8 percent and 10.7 percent for females. In May 1998, their unemployment rates were, respectively, 11.0 and 9.0 percent.

Age is a significant variable, of course. While the overall unemployment rate in 1997 for 16-24 year-olds was 11.8 percent, 16-17 year-old males were unemployed at a rate of 19.1 percent; 20-24 year-old males at less than half that rate, 8.9 percent. Females' unemployment rates, 10.7 overall, ranged from 17.2 percent for 16-17 year-olds to 8.1 percent for 20-24 year-olds.

In 1989, a year after publication of *TFH*, 72.1 percent of 16-24 year-olds, on average, were employed full- or part-time. In 1997, in the midst of a strong and growing economy, the employment rate was actually lower: 71.1 percent. In the eight intervening years, this rate, as measured by the monthly Current Population Surveys, had dipped as low as 68 percent. Of those fortunate enough to find full-time work (35 or more hours a week), 59.4 percent of all out-of-school youth were employed full-time in 1989, but only 56.3 percent in 1997 — three percentage points below the 1989 rate.

Once again, full-time employment rates were highly correlated with educational attainment. High school dropouts were employed full-time over this period at rates as low as 30 percent and never higher than 36 percent. High school graduates, on the other hand, had full-time jobs at rates almost twice as high: from 58 to 64 percent. Including both full- and part-time work, the correlation between reported legal employment and educational attainment is starkly depicted in Figure 1-5.

The 1997 full-time employment rates were also highly correlated with educational attainment, with rates of 34.9, 60.0, 67.2 and 82.3 percent for high school dropouts, high school graduates, those with 1-3 years of college, and four-year college graduates, respectively. These may be compared with the 1989 rates of 36.5, 64, 71.4 and 82.9 percent. The key point, once again, is that not only was there no improvement in full-time employment rates of out-of-school youth between 1989 and 1997 but, *despite generally rising educational attainment and a very strong economy, the full-time employment record for young people was actually somewhat worse in 1997 than in 1989*. For The Forgotten Half, those with only a high school diploma or less, there has been no progress in their employment fortunes.

Two fundamental facts are most striking: (1) *even in an economy so often characterized by "boom," only 60 percent of young persons with only high school equivalency held full-time work in 1997, and (2) even that number was lower than the 64 percent of 1989 and 1990.*

Predictably, these labor force surveys demonstrate that it is most minorities who consistently experience substantially lower employment than whites. In 1997, the employment rate of young white youth (full- and part-time) averaged 74.7 percent, 59.3 percent for those employed full-time. Rates for Hispanic youth were 64.6 percent overall and 53.4 percent full-time. Black youth, by contrast, had an overall employment rate of 54.8 percent and a full-time employment rate of only 42.1 percent.

But these correlations between employment rates, race and ethnicity are powerfully ameliorated by educational progress. Figure 1-6 displays the dramatic effects that additional years of schooling have on the employment experiences of black, white and Hispanic young people.

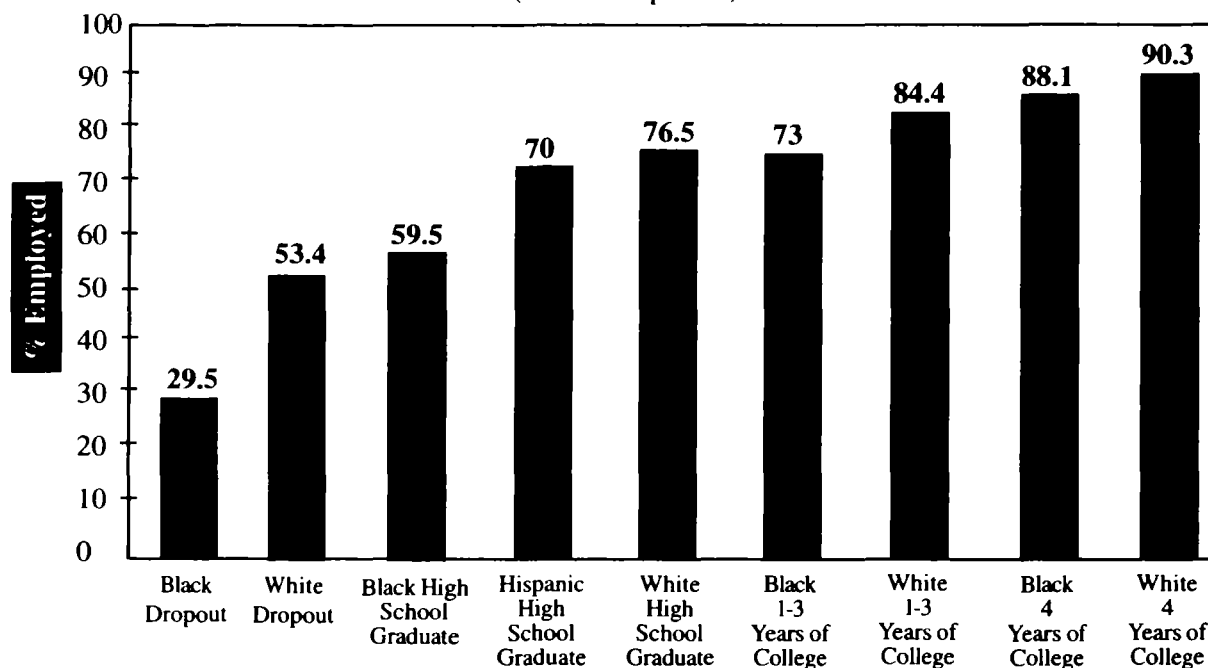
At the same time, Figure 1-6 demonstrates that race, and not just education, still matters in the workplace. The difference in employment rates between white high school graduates and white four-year college graduates, for example, is roughly 14 percentage points, while the difference between black and white high school graduates is larger: 17 percent. And blacks with 1-3 years of postsecondary education are employed at a lower rate than white high school graduates and 11.4 percentage points lower than their white educational counterparts.

LABOR MARKET PROBLEMS OF OUT-OF-SCHOOL YOUTH

Professor Andrew Sum and his colleagues at Northeastern University's Center for Labor

Education and Race Both Matter

Figure 1-6: Employment Rates of 16-24 Year-Old Out-of-School Youth in Selected Race and Schooling Categories, 1996
(numbers in percent)



SOURCE: CLMS based on monthly Current Population Surveys, 1996.

Market Studies (CLMS) have spotlighted the labor market problems of the nation's 17-24 year-olds who are not currently enrolled in a formal educational program. Their research tells much about three salient issues: (1) how these young people are faring in the labor market today compared with similar age cohorts in 1989, (2) how the widely-heralded economic boom of the mid-to-late 1990s affected them and (3) the educational character-

istics that seem to influence young people's labor market problems.

CLMS analyses depict four types of mutually exclusive labor market problems:

- (1) *unemployment*. (This follows the official Bureau of Labor Statistics' definition, i.e., persons not working but actively looking for a job or awaiting recall from a

temporary layoff.)

- (2) *employed part-time* (less than 35 hours a week) for economic reasons, such as inability to find a full-time job. Typical part-time work is 20-21 hours a week.
- (3) *not working and not actively looking for work* but reportedly wanting to be employed now.
- (4) *working full-time but unable to earn an annual income above the four-person family poverty line*. In March 1997, this meant earnings of about \$7.72 per hour, \$309 per week, or \$16,068 annually.

As Figures 1-7 through 1-9 show, despite some recent modest improvements, probably traceable to the relatively strong economy, the stark reality is that, in March 1997, 21 of every 100 out-of-school youth, ages 17-24, were either unemployed, underemployed or not actively seeking work even though they wanted a job (Figure 1-7). More striking yet, 26 of every 100 out-of-school youth, although working full-time, were earning less than the poverty line income standard for a four-person family.

As we have come to understand in the latter decades of this century, earning and learning are highly correlated. Thus, it is no surprise that those with the least formal education suffer the most in the labor market. In March 1997, 58 of every 100 school dropouts experienced one of the four labor market problems cited above, as did 46 percent of high school graduates but only 19 percent of four-year college graduates. Surprisingly, however, young people with 13-15 years of

schooling, but no bachelor's degree, actually fared worse in the labor market than those completing 12 years of study (Figure 1-8).

Summarizing the three figures, CLMS researchers concluded that, as a consequence of their low rates of full-time employment and weekly earnings, only 11 percent of young high school dropouts in March 1997 were employed full-time and earning \$309 or more per week, contrasted with 26 percent of high school graduates and 57 percent of four-year college graduates (Figure 1-9).

Thus, between 1989 and 1997, the least educated members of The Forgotten Half not only failed more frequently to find jobs that would support families above the poverty line but, in fact, were less likely to be employed in such jobs in 1997 than they were at the end of the 1980s.

As Boesel, Alsalam and Smith conclude from their careful study of the labor market and GED recipients:

Neither the high school diploma nor "some college" have been sufficient to enable young adults to maintain earnings over the years since the 1970s. It seems unlikely that, in the absence of other macroeconomic changes, education policy alone can reverse this trend.

Boom or No Boom, It's Still a Tough Job Market for Young People

Figure 1-7: Incidence of Various Labor Market Problems Among Out-of-School 16-24 Year-Olds, March 1989 to March 1997

(Numbers in Percent. N=14.55 million youth)

Labor Market Problem	March 1989	March 1991	March 1995	March 1997
Unemployed	9.0	11.1	10.0	10.1
Employed Part-Time for Economic Reasons	6.1	8.2	7.2	6.3
Not in Labor Force But Want a Job Now	5.2	5.2	4.9	4.8
Worked Full-Time at a Weekly Wage Below the Four-Person Poverty Line	23.6	27.0	26.6	26.2
Any of the Above Problems	43.9	51.5	48.7	47.4

SOURCE: CLMS tabulations from March Current Population Surveys, 1989, 1991, 1997.

Figure 1-8: Percentage of 17-24 Year-Old, Out-of-School Youth Experiencing Various Labor Market Problems, by Years of Schooling Completed, March 1997

(N=14.55 million youth)

Labor Market Problem	YEARS OF SCHOOLING COMPLETED			
	Less Than 12 Years ¹	12 Years ²	13-15 Years	16 or More Years
Unemployed	15.3	9.6	7.8	3.2
Employed Part-Time for Economic Reasons	6.9	6.5	6.1	4.5
Not in Labor Force But Want a Job Now	8.2	4.1	3.6	1.0
Worked Full-Time at a Weekly Wage Below the Four-Person Poverty Line	27.9	25.7	31.7	10.3
Any of the Above Problems	58.3	45.9	49.2 ³	19.0

SOURCE: CLMS from March 1997 Current Population Survey.

NOTES:

¹This group includes persons with 12 years of schooling completed but no high school diploma or GED.

²This group includes GED recipients and persons with a regular high school diploma.

³Note that persons with 1-3 years of college experienced more labor market problems than high school graduates.

Figure 1-9: Percentage of Out-of-School 17-24 Year-Old Civilians Working Full-Time and Earning Weekly Wages Above the Four-Person Poverty Line, by Educational Attainment, March 1997
(numbers in percent)

Educational Attainment	Employed Full-Time in a Wage and Salary Job	% of Full-Time Earning \$309+ Per Week	Employed Full-Time and Earning \$309+ Per Week
All	54.4	51.8	28.2
Less Than 12 Years or 12 Years But No Diploma	38.9	28.1	10.9
12 Years With High School Diploma or GED	52.0	50.5	26.3
13-15 Years	71.7	55.7	39.9
16 or More Years	67.4	84.7	57.1

SOURCE: CLMS from March 1997 Current Population Survey.

EARNINGS: THE DISMAL DECLINE CONTINUES — “IT’S (STILL) THE ECONOMY, STUPID!”

It is now widely understood — if nonetheless ignored in most contemporary political discourse — that median family income in the United States has stagnated since 1973. While the top 40 percent of families enjoyed rising incomes, and the top five percent reaped immense and unprecedented rewards, the bottom 40 percent experienced declining, sometimes sharply declining, real income.

According to the U.S. Census Bureau, in 1973 the top 20 percent of the nation’s households received 43.6 percent of total household income. By 1993, their share had increased to 48.2 percent. The richest five percent saw their income rise from 16.6 percent in 1973 to 20 percent in 1993. The middle three-fifths of America’s families received 48.2 percent of total household income, squeezed down from 52.2 percent two decades earlier. And the poorest quintile saw their small share fall even further, from 4.2 to 3.6 percent.

Commenting on this changing distribution of income, John Cassidy questioned the validity of the notion that we Americans are, in fact, a predominantly “middle class” nation:

...the country has now split into four groups. At the top, there is an immensely wealthy elite, which has never had it so good. At the bottom, there is an underclass, which is increasingly divorced from the rest of society. And between these extremes

there are, instead of a unified middle class, two distinct groups: an upper echelon of highly skilled, highly educated professionals, who are doing pretty well; and a vast swath of unskilled and semiskilled workers, who are experiencing falling wages, stagnant or declining living standards, and increased economic uncertainty. To label this group "middle class" doesn't make sense. The phrase implies two things — rising living standards and a high degree of economic security — that no longer apply.

In this bifurcating economic environment, with increasing disparities of income, how have America's youth and young families fared?

- In 1989, a year after publication of *TFH*, the median real weekly earnings of young men under age 25 and employed full-time were \$351 a week. This represented a drop of fully 24 percent from the 1973 level of \$463. However, by the second quarter of 1998, real weekly wages of young male workers had declined even further, to \$335. To be sure, the strong U.S. labor market in the first half of 1998 did push up real weekly wages to the highest levels of the 1990s. The Bureau of Labor Statistics reported that the median full-time weekly wages of young men rose nearly six percent in the first half of 1998. Subtracting 1.7 percent inflation from June 1997 to June 1998, young male workers had real weekly wage gains of four percent — the best performance in over 20 years. These are impressive results, but *the bottom line is that inflation-adjusted earnings were still almost one-third below what their counterparts*

were earning 24 years — a full generation — earlier.

- The picture for young women was only slightly less gloomy. Their weekly earnings fell from \$350 in 1973 to \$305 in 1998.
- Although the wage gap between young men and young women has narrowed in the past quarter century, both genders suffered sharp wage losses. In 1973, young women employed full-time earned only 75 percent as much as young men. By 1997, that ratio had risen to 92 percent, but progress in closing the gender wage gap was illusory, mostly because of the persistent and sharp decline in the wages of young men, less due to improvement in women's wages.

Marital status is closely correlated with the incidence of poverty. Some scholars believe that falling real wages lead to falling marriage rates, as well as increased crime and the reduced ability of young unwed fathers to pay child support. Other scholars recognize the correlation but differ on the issue of causation.

Robert Lerman of American University and The Urban Institute, for example, argues that declines in marriage rates between 1971 and 1989 preceded reductions in earnings: the "trend away from marriage accounted for nearly half the increase in income inequality and more than the entire rise in child poverty rates." He continues:

...between 1971 and 1989, the proportion of children living in the husband-wife families fell from 91 percent to 83 percent

among whites and from about 61 percent to 40 percent among blacks. Had the marriage rates of mothers remained at the 1971 levels, poverty rates among black children would have declined from 41 percent in 1971 to about 30 percent in 1989, instead of rising to 43 percent. Nearly one-third of poor black children would have escaped poverty. For white children, poverty would have fallen from the observed twelve percent to ten percent. Thus, changes in marriage rates prevented the racial gap from narrowing sharply.

Regardless of which came first, declining earnings and marriage rates, coupled with increasing child poverty and one-parent families, all accelerated sharply in the past quarter century. Between 1970 and 1996, the proportion of children under age 18 who were living with two parents declined from 85 to 68 percent. The percentage of children in one-parent families jumped from 12 to 28 percent, while the married proportion of 25-29 year-old men fell from 81 to 53 percent. Also, in the same time period, the proportion of 18-24 year-olds maintaining a family household fell by almost half, from 38 to 20 percent. Overall, in 1970, 10.5 percent of women and 19.1 percent of men ages 25-29 had never been married; by 1996 those percentages had soared to 37.6 and 52 percent, respectively. The dramatic decline of real earnings for both genders is illustrated in Figure 1-10.

The Gender Gap Narrows As Both Men and Women Lose Earnings

Figure 1-10: Median Real Weekly Earnings of Full-Time Employed Young Adults Under Age 25 by Gender, 1973-97
(in inflation-adjusted 1997 dollars)

Year	Men	Women	Ratio of Women to Men
1973	\$463	\$350	75.6%
1979	\$424	\$334	78.8%
1989	\$351	\$318	90.6%
1991	\$336	\$314	93.4%
1995	\$319	\$290	90.9%
1996	\$314	\$290	92.3%
1997	\$317	\$292	92.1%
% Change 1973-89	-24.2%	-9.2%	
% Change 1989-97	-9.7%	-8.2%	
% Change 1973-97	-31.5%	-16.5%	

SOURCE: CLMS from U.S. Bureau of Labor Statistics weekly earnings data from CPS household surveys.

- Another way to describe the declining economic fortunes of young men is to compare the median weekly earnings of full-time workers under age 25 with those of men over age 25. In 1967, the under-25s earned 74 percent as much as older men. That ratio dropped to 67 percent in 1973, 54 percent in the 1982-91 period, and only 51.5 percent in 1997.
- Young employed women also experienced the same relative deterioration in comparison to older full-time female workers. In 1967, their earnings ratio was 93.7 percent; in 1973, 85.1 percent; in 1989, 72 percent; in 1996, 64 percent, and to a low in 1997 of 63.2 percent — less than two-thirds of what older women workers earned.
- *For both genders, then, both the absolute and relative earnings of full-time employed young adults are at 25-year lows. Despite the vaunted American “economic miracle” of the late 1990s, things have only gotten worse, not better, for many of the young people chronicled in TFH in 1988.*

HOW YOUNG FAMILIES MANAGED — OR DIDN'T

TFH reports of 1988 provided important facts about older adolescents as well as young families and their children. Young families were defined as “primary” families headed by a person under the age of 30, that is, families consisting of two or more persons related by blood, marriage or adoption living in an independent household (but not the households of others).

Still Losing Ground

Three basic indicators of the well-being of such young primary families are examined here, although this brief treatment cannot do justice to the many varieties of families that exist in the United States today and their varying economic conditions:

- (1) Median real (inflation-adjusted) annual incomes of young families
- (2) Poverty rates of young families
- (3) Poverty rates of children in young families

Median Annual Incomes (in 1996 dollars)

In 1989, the real median annual income of young families with a household head under age 30 was \$30,435. Over the next three years, however, these families lost 12 percent of their incomes during the recessionary environment of the early 1990s. By 1996, that median income had recouped somewhat, to \$28,500, but still remained 6.4 percent lower than seven years earlier. Leaving aside technical questions about the adequacy of the Consumer Price Index for All Urban Consumers (the CPI-U) which is used to adjust nominal incomes for inflation, the conclusion is that, *from 1973 to 1996, the average young family household suffered an inflation-adjusted income loss of over 14 percent.*

The 14 percent loss greatly understates the economic pain experienced by certain categories of America's young families. Over this same 24-year period, young families headed by a non-Hispanic black lost 33.2 percent of their income; those headed by Hispanics lost 18.2 percent; and those headed by high school dropouts lost 33.6 percent. *Even those young families headed by high school graduates experienced a real loss in purchasing power of 22 percent.*

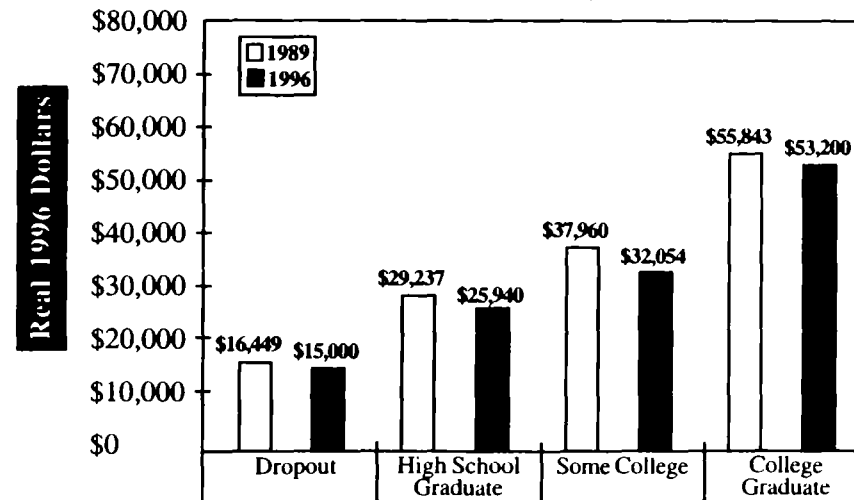
As *TFH* reported in 1988, only four-year college graduates and their families did well over the years. Their real income gain from 1973 to 1996 was 17.3 percent. In 1996, young families headed by a high school dropout earned about \$15,000 annually, compared with \$26,000 for those headed by a high school graduate and over \$53,000 by a four-year college graduate. *In the 1990s, the wide income gaps correlated with formal educational attainment continued to widen, not narrow. Yet, young families of all educational levels, even four-year college graduates, earned less in real terms in 1996 than in 1989 (Figure 1-11).*

Poverty Rates of Young Families

- The percentage of Americans of all ages living in poverty rose from 12.8 to 13.7 percent between 1989 and 1996.
- By the end of the 1980s, the poverty rate among America's young families was 21 percent. During the recessionary and low growth years of 1990-92, that rate rose sharply, to 26 percent. In 1996, the young family poverty rate was 24 percent, still three percentage points higher than in 1989. *Despite the economic boom of the late 1990s, about one-quarter of America's*

Regardless of Education, Real Incomes of Young Families are Down

Figure 1-11: Median Real Income of Young Families by Highest Level of Educational Attainment, 1989 and 1996
(in constant 1996 dollars)



SOURCE: CLMS tabulations from March 1990 and March 1997 CPS surveys. Note that those with 1-3 years of college suffered proportionately larger declines in real income than high school graduates.)

young families still live below the poverty line.

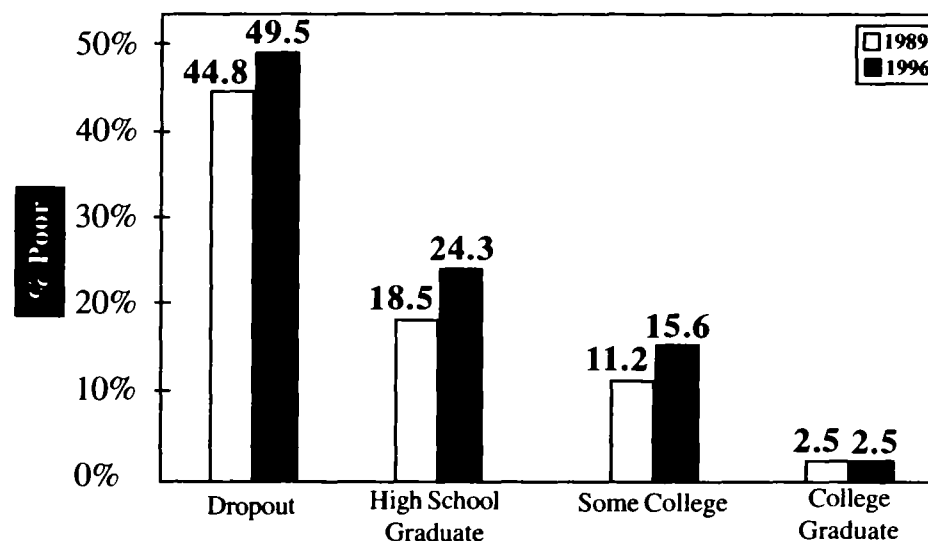
- As in the data on median annual incomes, poverty rates among young families vary greatly by family type and the presence of children. While the 1996 poverty rate among young, married couple families was only ten percent, among female-headed young families (including single women without children) it was 56 percent, and among single-parent families headed by women it was 62 percent.
- Poverty rates also vary enormously by the educational level of the family head. *In 1996, one-half of all young families headed by a high school dropout were poor, as were one-fourth of those headed by a high school graduate versus only one out of 40 families headed by a college graduate.*

Poverty Rates Among Children in Young Families

- Children under age 18 comprise about a quarter of the population but almost 40 percent of the total poor. The percentage of children in poverty has remained around 20 percent since 1981.
- In 1989, 35 percent of all children in young families were poor, nearly double the rate of 1973. Between 1989 and 1992, the poverty rate among these children rose sharply, from 35 to 42 percent. Since then, poverty rates have declined somewhat, but they still remained at 38 percent in 1996, three percentage points higher than in 1989.

Poverty: The Flip Side of Education

Figure 1-12: Poverty Rates of Young Families by Highest Level of Educational Attainment of Household Head, 1989 and 1996
(numbers in percent)



SOURCE: CLMS tabulations from March 1990 and March 1997 CPS surveys.

- Children living in single-mother families are the most likely to be poor. During the period 1989-96, 70 percent or more of such children were poor. Marginal improvements in the poverty data for children in single-mother families have occurred since 1992 as more single mothers became employed and earned higher wages. Still, 59 percent of children under age six lived in below-poverty-level families in 1996.
- Poverty rates of children in young families are quite high among all racial and ethnic groups,

but they are much higher among minority children. In 1996, according to the Federal Interagency Forum on Child and Family Statistics, ten percent of white children lived in poverty-level families, compared with 40 percent of black and Hispanic children.

- Poverty among children in 1996 varied widely by the educational attainment of the family head. Among families headed by a young adult lacking a high school diploma, 64 percent of the children were poor versus 34 percent for high school graduates and only

seven percent for four-year college graduates. *Except for children living in families headed by four-year college graduates, all poverty rates for children were higher in 1996 than they were in 1989.*

THE HOUSEHOLD LIVING ARRANGEMENTS OF YOUNG AMERICANS — or “WHY DON’T THEY EVER LEAVE HOME?”

As we have seen, young adults continue to experience substantial declines in their median real (inflation-adjusted) annual earnings. Compared with 1989, fewer young adults were able to support a family of four above the poverty line in 1996. Based on the U.S. Census Bureau’s Current Population Survey, 32 percent of young adult men (ages 20-29) were living at home in 1974. By 1990, that percentage had risen to 40 percent and by 1997 to 41.5 percent. Among young African American and Hispanic men, the percentage of those still at home with parents or other relatives had risen to 50 percent or more.

As Carol Emig discusses at length in Chapter Three, changes in the composition of the American family in recent decades have been profound. The proportion of married adults over age 18 fell from 71.7 percent in 1970 to 60.3 percent in 1996. In 1996, 63 percent of white adults were married contrasted with only 42 percent of black adults, a sharp decrease from the 64 percent marriage rate of blacks in 1970. Divorced persons constituted the fastest growing segment of the population, quadrupling from 4.3 million in 1970 to 18.3 million in 1996 — ten percent of all adults. In the

More Young People Are Still Living At Home

Figure 1-13: Percent of 20-29 Year-Olds Living in the Homes of Parents or Other Relatives, by Race/Ethnic Origin and Highest Level of Educational Attainment, 1974, 1990 and 1997
(numbers in percent)

		MALES			FEMALES		
		1974	1990	1997	1974	1990	1997
All		32.2	39.8	41.5	21.5	28.5	30.1
White, non-Hispanic		30.9	37.0	37.3	20.0	26.3	28.1
Black, non-Hispanic		44.2	53.4	51.6	31.5	35.3	34.8
Hispanic		30.6	43.2	48.7	20.2	33.0	32.7
Years of Schooling	Student	69.4	73.6	73.5	73.4	67.0	63.2
	Less than 12 Years	32.0	42.0	44.1	16.0	26.7	24.7
	12 Years	28.6	38.7	41.1	17.2	24.5	26.5
	13 to 15 Years	29.0	31.2	33.8	21.1	21.4	24.9
	16 Years	19.1	22.5	22.3	14.6	18.2	18.2
	17 or More Years	11.0	18.5	11.0	10.5	14.8	6.8

SOURCE: CLMS tabulations from March Current Population Surveys, 1974, 1990, 1997.

wake of these facts, the proportion of children under age 18 living with two parents fell from 85 to 68 percent between 1970 and 1996.

Once again, educational attainment, so strongly correlated with earning power, was directly related to young males' ability to leave home and form independent households. While 44 percent of those lacking a high school diploma lived at home in March 1997, only 22 percent of those holding a bachelor's degree and 11 percent of those with a master's or higher degree did so.

The patterns for young women are quite similar, although the percentages of women who live with their spouses or head their own households as single parents is greater than for men. In 1997, 30 percent of 20-29 year-old females still lived with parents or other relatives, an increase of almost nine percentage points since 1974. As with males, race, ethnicity and educational attainment were significant variables in determining young women's ability to form independent households.

OUT-OF-WEDLOCK BIRTHS: NEW NORM FOR TEENS?

Teen births and out-of-wedlock childbearing have a profound effect on the futures of America's young people. Babies born to teenagers are at greater risk of low birth weight, serious and long-term disability and infant death in the first year of life. Also, as reported by the Robin Hood Foundation and Child Trends,

Compared with children whose mothers were 20-21 when they were born, children whose mothers were 17 or younger when they were born tend to have lower cognitive scores and more difficulty in school; have poorer health yet receive less health care; have less stimulating and supportive home environments; have higher rates of incarceration; and have higher rates of adolescent childbearing.

Young women who give birth out-of-wedlock are most apt to remain single parents and to raise their children in poverty. Without a second breadwinner in the family, and because of their generally low educational attainment and limited paid work experience, these young women and their children are at high risk of continued poverty and dependency.

In 1988, when *TFH* was published, the overall birth rate of 15-24 year-old women, married and unmarried, was 88 births per 1,000 women. By 1995, that rate had fallen to 83 per 1,000. Nearly all of the decline occurred among 20-24 year-olds, while 18 and 19 year-olds experienced a three-point increase in their birth rate. From 1986 to 1991, the birthrate of 15-19 year-old women rose 24 percent, but from 1991 that rate declined 12 percentage points, from 62.1 births per 1,000 women to 54.7 in 1996. (This latest rate represents a remarkable decline from the historic high of 96.3 per 1,000 in 1957.) While the overall decline in childbearing was 4.4 births per 1,000 women, the declines among African American women and those of "other races" were particularly sharp at 17.7 and 15.8 births per

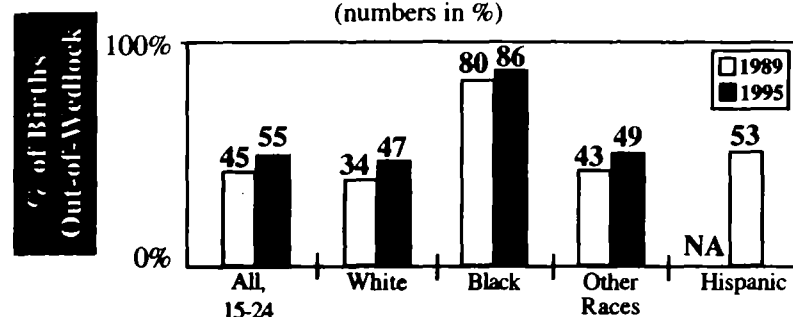
1,000, respectively. Only among Hispanic women was there an increase: 3.5 births per 1,000.

According to the National Center for Health Statistics' 1995 National Survey of Family Growth, the proportion of teenagers who are sexually experienced has stabilized, reversing the steady increases of the past two decades. Condom and other contraceptive use is up among both teen men and women.

Between 1989 and 1995, total U.S. births among young women declined by 7.5 percent, by 6.2 percent among white women and by 13.4 percent among black women. Black teenagers' birth rate fell 21 percent between 1991 and 1996 to the lowest rate ever recorded, 91.7 per 1,000. However, total births among Hispanic women soared by 27.4 percent so that, in 1995, nearly half of all births — 48 percent — occurred among minority women whose birth rates were more than double that of non-Hispanic whites. Overall, childbearing within marriage continued to decline sharply, from four million in 1960 to 2.7 million in 1996. The birth rate for all married women declined by almost half, from 157 to 84 per thousand.

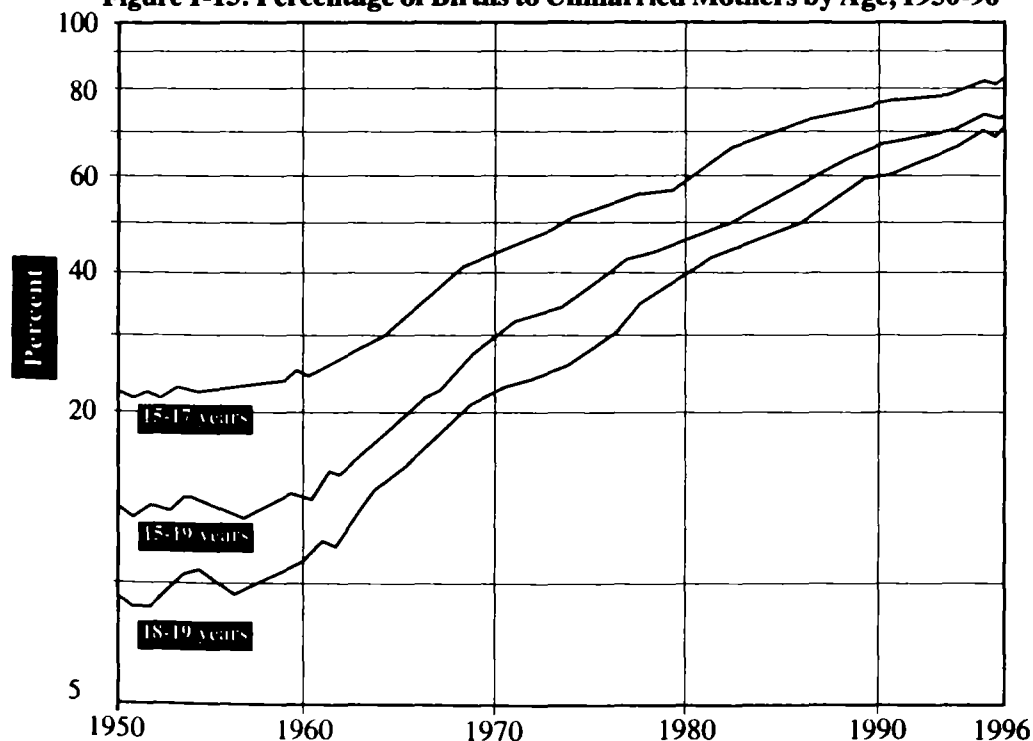
Prior to 1980, most teenagers giving birth were married. Today, out-of-wedlock births are virtually the norm, with one of every three births in 1996 to an unmarried mother. Among teenage mothers under age 20, those who were unmarried quintupled, from 15 percent in 1960 to 76 percent in 1994. In the same time period, births to unmarried mothers ages 20-24 increased ninefold, from five to 45 percent. Overall, while the total number

Figure 1-14: Proportion of All Births Among Young Women, Ages 15-24, That Were Out-of-Wedlock, by Race and Ethnic Group, 1989 and 1995



SOURCE: National Center for Health Statistics. September, 1991. "Advanced Report of Final Natality Statistics, 1989." Monthly Vital Statistics Report, vol. 40, no. 8, Supplement; _____. 1997 _____. 1995. vol. 45, no. 11, Supplement. Tabulations by CLMS.

Figure 1-15: Percentage of Births to Unmarried Mothers by Age, 1950-96



SOURCE: National Center for Health Statistics. "Teenage Births in the United States: National and State Trends, 1990-96." April 1998.

of U.S. births among young women declined, the share of births out-of-wedlock rose from 45 percent in 1989 to 55 percent in 1995. Among white women, 47 percent of 1995 births were out-of-wedlock; among Hispanics and women of "other races" the ratio was one out of two births and among black women 86 percent.

HOME OWNERSHIP: THE YOUNG FAMILY'S AMERICAN DREAM

In 1995, 36 percent of all U.S. households with children (including both renters and owners) faced severe housing problems, defined as physically inadequate, crowded or costing more than 30 percent of household income.

Owning one's own home, even a heavily mortgaged one, has long been considered a central feature of the American Dream. Here, too, the reality is grim for families headed by an individual aged 20-29 and living independently of other households. Based on the annual Current Population Surveys, such families' home ownership rate fell from 49 percent in 1980 to 38 percent in 1990, where this rate has remained substantially unchanged through 1997.

As we have noted, the falling or, at best, stagnating real incomes of the majority of wage-earners is certainly part of the explanation for this decline in home ownership. Rising home prices are another. According to the Fannie Mae/Freddie Mac home-price index, the average price of homes nationwide increased by nearly 330 percent between 1975 and mid-1995, compared with a rise in the Consumer Price Index of about 220

percent. Thus, on average, home prices have more than doubled in the past two decades. First-time buyers who can't "trade up" are obviously hardest hit by such inflation.

Non-Hispanic white families are almost three times as likely as blacks and twice as likely as Hispanics to own their homes. Despite recent gains in overall minority home ownership, only 17 percent of young black families owned in 1997 versus 47 percent of whites, thus constituting a major source of widening wealth inequality in the nation today.

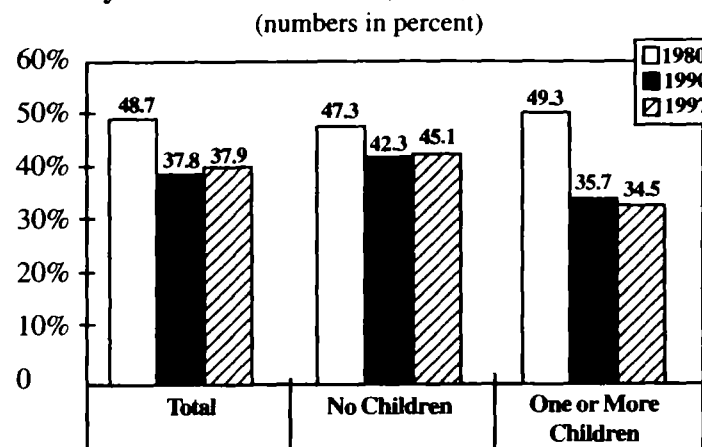
Given the widening earnings differentials, it is not surprising that home ownership rates also correlate highly with the educational level of the family head, ranging in 1997 from 22 percent for high school dropouts to 55 percent for four-year college graduates. What is especially noteworthy is the widening gap in home ownership rates based on educational attainment. In 1980, young college graduates' ownership rate exceeded that of high school graduates by only seven percentage points (59 vs. 51 percent). By 1997, however, that gap had widened to 18 points (55 vs. 37 percent).

HEALTH INSURANCE

Young people are usually considered to be among our healthiest citizens. Yet, given the low educational attainment and depressed earnings levels of much of this population, when disease and accidents strike, the victims are largely uninsured. Given the persistence of poverty, it is not surprising that 15 percent of all children — 10.7 million children — had no health insurance in 1997. Young adults ages 18-24 were the least insured age group in the nation, only 30 percent having coverage.

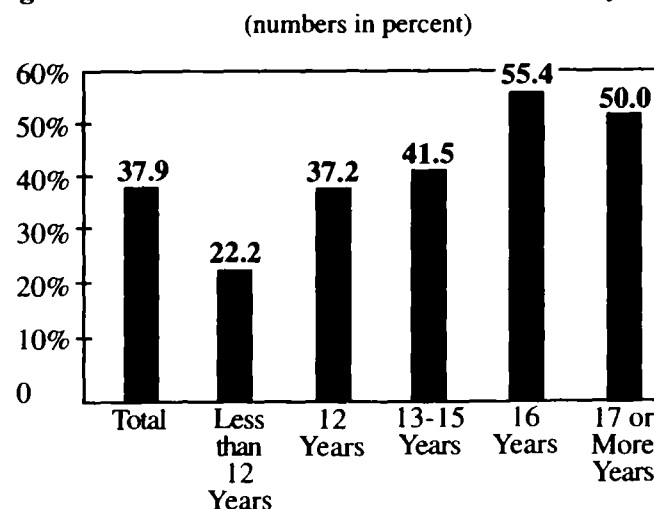
The Fading Dream of Home Ownership

Figure 1-16: Home Ownership Rates Among Families Headed by 20-29 Year-Olds, by Presence of Children, 1980, 1990 and 1997



SOURCE: CLMS from March 1980, 1990, 1997 Current Population Surveys.

Figure 1-17: Home Ownership Rates Among Families Headed by 20-29 Year-Olds, by Highest Level of Educational Attainment of Family Head, 1997



SOURCE: CLMS tabulations from March 1997 Current Population Survey.

Between 1976 and 1979, the number of 20-29 year-old males with any type of health insurance coverage fell from 79 percent to 66 percent. Among young women, the decline was from 84 to less than 77 percent. While young adult men are the least insured age/gender group in the nation, young women of childbearing age are also especially vulnerable.

Using March 1997 Current Population Survey data, Kenneth Thorpe and Curtis Florence found that 5.1 million out of 11.3 million uninsured children under age 19 were eligible in 1996 for Medicaid but were not participating. Four out of five parents of uninsured children were themselves uninsured.

Employer-provided health insurance used to cover more than half of all employed young men (60 percent in 1979). In recent years, employee "downsizing" in large firms and employee wage and benefit "give-backs" have greatly eroded even this partial coverage. In 1996, according to the Current Population Survey, only 43 percent of young men and 41 percent of young women enjoyed employer-financed health insurance. And, as we have seen elsewhere in this chapter, insurance coverage is highest among our best educated young people and highest among white non-Hispanics. Minority group members and those with the fewest years of schooling are the least likely to have health insurance of any type.

YOUNG AMERICANS BEHIND BARS

As we are painfully aware, Americans, especially young ones, are increasingly becoming

inmates in federal and state prisons and local jails. Between 1985 and 1996, the total number of inmates rose from 744,000 to 1,631,000. Overall, the incarceration rate in this 11-year period nearly doubled from 313 to 615 inmates per 100,000 residents.

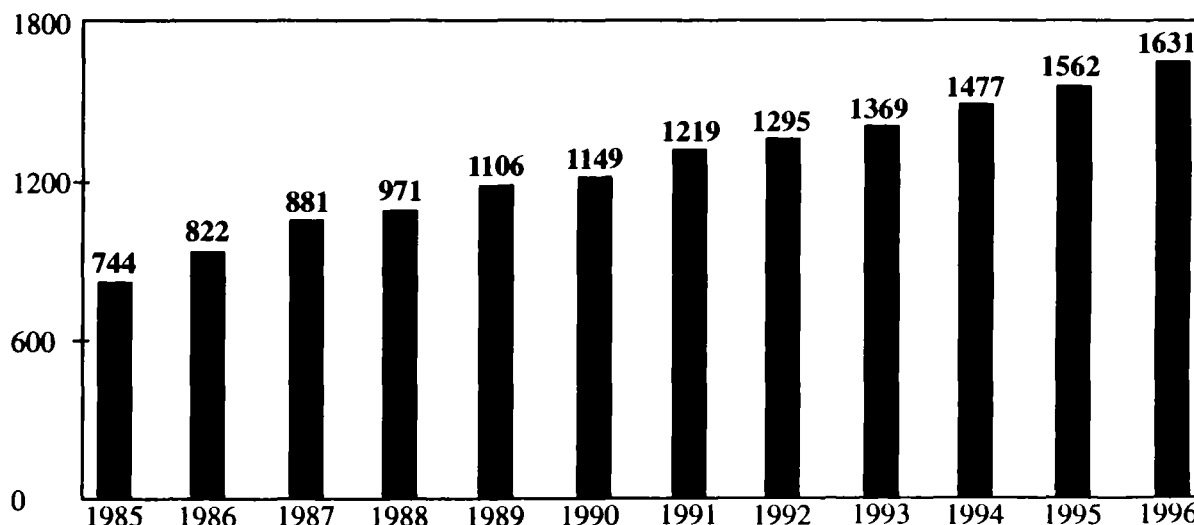
Because the Bureau of Justice Statistics has not released data since 1991 on the age distribution of inmates in state prisons and local jails (it does publish the age distribution of federal inmates), it is not possible to identify precisely what fraction of the total incarcerated population is under age 25 or

30. However, CLMS estimates (as seen in Figure 1-20) that the number of incarcerated young men under age 25 likely doubled between 1986 and 1995, from 178,000 to 359,000. Moreover, because the total number of young men under age 25 declined in this period, the true incarceration rate of young men more than doubled, from 1.3 to 2.8 percent.

These estimated incarceration rates substantially undercount the number of young men under the control of the criminal justice system. Due to prison overcrowding and the high costs of

A Great American Growth Industry

Figure 1-18: Total Number of Inmates in Federal and State Prisons and Local Jails, 1985 to 1996
(in thousands)



SOURCE: U.S. Bureau of Justice Statistics.

incarceration, many young men, rather than undergoing lengthy incarcerations, are placed on probation or flow in and out of jails, prisons and parole.

In 1994, according to the National Sentencing Project (NSP), on any given day, ten percent of all 20-29 year-old males were in jail, in prison, on probation or on parole. That rate varies considerably by race/ethnic group. Seven percent of young white males were under the control of the criminal justice system compared with 12 percent of Hispanic males and 30 percent of young black males. In the nation's inner cities, this criminal justice involvement ratio may reach close to 33 percent, according to NSP. (In 1995, over five million persons of all ages were under some form of correctional supervision.)

Naturally, criminal conviction and incarceration have long-term adverse effects on the employability and earnings of these young men. Incarceration reduces work experience and the acquisition of skills, two major determinants of future earnings potential. Young men convicted of crimes earn significantly less as young adults than their non-convicted counterparts with similar demographic characteristics. And such low earnings are linked in turn with the social problems and pathologies cited earlier.

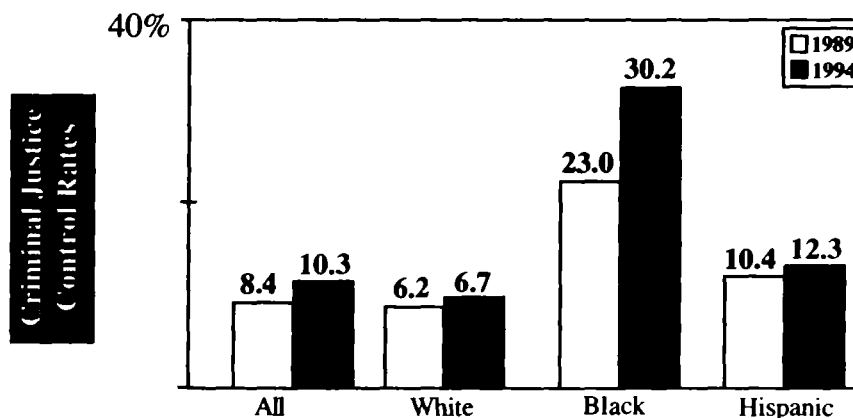
Lest these grim data on crime and incarceration contribute further to the rampant perception of youth as predators and criminals — a perception reported by Daniel Yankelovich in the next chapter — a balanced presentation is in order. According to Independent Sector, six out of ten youth currently volunteer in various forms of

Figure 1-19: Estimated Numbers of Young Male Inmates in Federal and State Prisons and Local Jails, 1986 and 1995

Year	(A) Total Number of Men (18-24) in the Population	(B) Number in Prisons and Jails	(C) Percent in Prisons and Jails
1986	13,502,061	177,952	1.3
1995	12,904,674	359,419	2.8
Absolute Change, 1986-1995	-597,387	181,467	1.5
Relative Change, 1986-1995	-4.4	102	115.4

SOURCES: (i) Population data for young men in column (A) are derived from the Current Population Surveys (March 1996 and March 1995) for the civilian non-institutional population adjusted to include the incarcerated population; (ii) Estimates of the total incarcerated male population are derived from the U.S. Department of Justice, Bureau of Justice Statistics.

Figure 1-20: Criminal Justice Control Rates of 20-29 Year-Old Men
(numbers in percent)



SOURCE: Mauer Marc and Tracy Huling, "Young Black Americans and the Criminal Justice System: Five Years Later." The Sentencing Project, Washington, DC, October 1995.

community service, and a 1996 Harris poll found almost 90 percent of youth willing to participate in programs to reduce drug use and crime in their communities. More to the point, according to the federal Office of Juvenile Justice and Delinquency Prevention, 99.5 percent of youth never get into trouble with the law or have only a single brush with it. Finally, juvenile crime is at its lowest rate in nearly a decade, with both property and violent crime down significantly since 1992 — all despite spectacular media coverage to the contrary. (See Coalition for Juvenile Justice, *False Images? The News Media and Juvenile Crime*.)

VOTING BEHAVIOR

Although 18-21 year-olds became eligible to vote in 1972, their use of the franchise has been even more dismal than that of older Americans. In the 1996 presidential election, 65.9 percent of the entire voting age population was registered to vote and 54.2 percent actually voted. Among 18-24 year-olds, 48.2 percent were registered, while only 32.4 percent cast ballots. (In 1972, 58.2 percent were registered and 49.6 percent voted.)

Unlike older people, homeowners, married couples, those with more schooling, high incomes and good jobs, most young adults today are disconnected from the political process — and apparently pay the price for that choice.

IS THERE STILL A SAFETY NET? IF SO, DOES IT WORK?

To what extent, if any, do government transfer programs ameliorate the rather dire economic conditions faced by the least educated and least healthy Americans at the end of the 20th

Century? According to the Center on Budget and Policy Priorities in its 1998 study, *Strengths of the Safety Net*, one should consider not merely earned income but federal government transfer programs (both cash and in-kind benefits) as well if we are to understand the true state of America's least educated, least healthy and least independent citizens. Such programs include Aid to Families with Dependent Children (AFDC, now called Temporary and Necessary Assistance for Families — TANF), Supplemental Security Income (for those with mental and physical disabilities), food stamps, school lunches, public housing, rental housing subsidies, the Earned Income Tax Credit (EITC) for low-income working families and Medicaid.

The Center concluded that, without these various safety nets, 57.5 million people — 21.6 percent of all Americans — would have been classified in 1996 as below the poverty line. Counting the benefits as income, however, reduced the number of those below the poverty line by nearly half, to 30.5 million persons, or 11.5 percent of the total U.S. population. Stated affirmatively, "government benefit programs lifted 27 million people out of poverty in 1996," including 31.9 percent of all otherwise poor children. AFDC aided half the nation's poor children, and food stamps assisted about 80 percent of all poor children. However, the government safety net program that helped the most was EITC, lifting 2.4 million children — 37.3 percent of all poor children — out of poverty in 1996.

Using data in the March 1996 Current Population Surveys, the Center for Labor Market

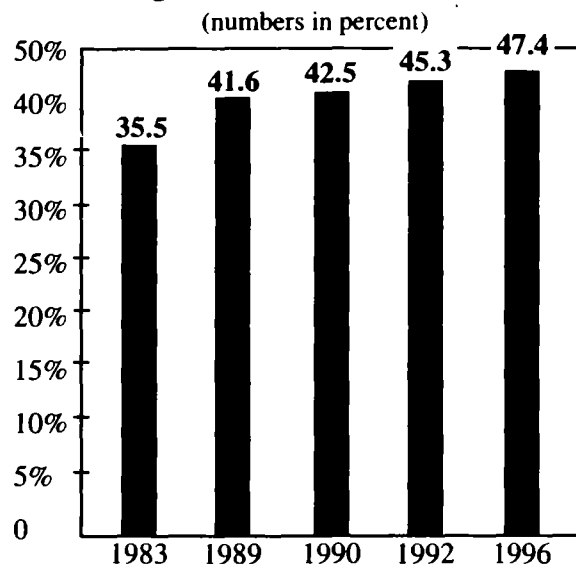
Studies found that the percent of 18-29 year-old males who were aided by one of these five programs (AFDC, SSI, Housing Assistance, Food Stamps or Medicaid) rose from 9.1 percent in 1989 to 12.6 percent in 1996. About one of every four young African American men, one of every five young Hispanic males and one in 12 young white males were helped by one or more of these benefit programs. Among young women, 21 percent received one or more of these safety net benefits, compared with 12.5 percent of young males. The percentage of young women receiving benefits rose from 15 percent in 1989 to almost 21 percent in 1996. Here, too, minority women — usually single mothers — received benefits disproportionate to their share of the total population: 41 percent of all young blacks and 31 percent of Hispanics versus only 14 percent of young white women.

Once again, educational attainment makes a crucial difference. Dropouts were nearly twice as likely to receive government supports as high school graduates (49 versus 27 percent) and 12 times more likely to do so than college graduates (49 versus four percent).

In sum, many members of The Forgotten Half continue to levy a heavy burden on society — in high incidence of poverty, dependence on public benefits and in raising children unable to contribute positively and fully to our economy and polity.

THE RISING TIDE OF COLLEGE ENROLLMENT

While harsh — and at times unfair —

Figure 1-21: Percent of Eligible 16-24 Year-Olds Enrolled in College, 1983-1996

SOURCE: CLMS tabulations of CPS surveys, selected years.

NOTE: "Eligible" designates 16-24 year-olds who have completed high school but not college.

criticism of the *quality* of American public education has become a leading characteristic of our times, there have been some noteworthy developments on the quantitative side — in terms of young Americans' aspirations for and actual completion of more years of formal education.

In 1985, 9.5 percent of the nation's high school students age 16 or over left school each year prior to graduation. By 1991, that annual dropout percentage had fallen by more than one-third, to six percent. From 1994 to 1996, however, this dropout measure rose again to an average of 7.3 percent, possibly reflecting a somewhat improved job market for teenagers

which encourages some of them to leave school and accept full-time employment, and the increasing percentage of poor and especially immigrant youth in our schools who experience high dropout rates.

Despite this historically improving trend, the "dropout pool" remains quite substantial; young adults ages 18-24 who did not graduate from high school and who were not enrolled in school in 1996 totaled 3.1 million persons, fully one of every eight persons in this age group. To be sure, many dropouts do return eventually to formal schooling and/or earn the alternative GED certificate. The majority, however, will lack the skills essential to employ-

ment success in today's economy.

In postsecondary education, the record of the last decade is remarkable. Using a measure of the "college-eligible" population (16-24 year-olds who have graduated from high school but not yet obtained a bachelor's degree and left college), the ratio of those actually *beginning* a program leading to an A.A., B.A., B.S. or advanced degree to the eligible population was 35.5 percent in 1983, 41.6 percent in 1989 and 47.4 percent in October 1996. *This 12 percentage point rise — a one-third increase in only 13 years — represents a major trend in American youth's postsecondary education behavior and a continuation of the nation's post-World War II "democratization" of educational opportunity.*

Unfortunately, youth attending non-degree-granting postsecondary education and training programs are not included in these enrollment totals. However, according to the National Center for Education Statistics, enrollments of all ages in noncollegiate postsecondary institutions in the fall of 1995 totaled 850,000, including 279,000 in public and 571,000 in private institutions. The latter category includes about 390,000 students in proprietary schools. Of these, 263,000 were enrolled in less than two-year programs of study.

When *TFH* was published in 1988, 59 percent of each year's high school graduating class was enrolling in two- or four-year colleges in the following October. (In itself, this was an increase from only 49 percent in 1980.) The Class of 1996 continued this major social trend, reaching a record 67 percent in 1997. (Thus, as Chapters Five and Six contend, in one sense, we now have a "Forgotten

Still Losing Ground

Third" in place of the former Forgotten Half.)

Disaggregating these historical high enrollment rates by gender and race, we find that, in 1997, women enrolled in colleges at a ratio of 70 to every 63 men. White college enrollment rates were up 3.1 percentage points from the late 1980s while African American enrollments rose more, by 4.5 percentage points. Enrollment rates among Latinos, on the other hand, fell by two percentage points.

Overall, a majority of high school graduates in each racial or ethnic group who graduate from high school now *begin* college immediately after graduation: 64 percent of white youth, 53 percent of African Americans and 51 percent of Hispanics. Of those attending college, about 64 percent enroll in a four-year college or university immediately following high school graduation.

When the entire national pool of 16-24 year-olds is analyzed (excluding those still in high school and those who had already earned a baccalaureate degree and left college), a record proportion of over 47 percent of this young age group were attending college in 1996. This contrasts with only 35.5 percent 13 years earlier, in 1983.

These enrollment increases, however, mask serious underlying problems in American postsecondary education. For one, five years after enrolling, over half (52 percent) of freshmen entering four-year colleges or universities have not yet graduated. In fact, this graduation rate has been declining steadily at both public and private institutions since 1983, when it stood at 58 percent. As Gladieux and Swail well document in Chapter Six, *beginning*

postsecondary studies is far from completing them. America's love affair with postsecondary education has much unfinished business to address.

* * *

With the notable exception of the increasing formal educational attainment of young adults, the picture which emerges from this brief summary of the current state of America's youth and young families is scarcely encouraging. In the decade since *TFH* was published, many of America's young people continued to experience deep social and economic traumas. As workers' real earnings declined further, family incomes, independent living arrangements, health insurance and sound, two-parent families also declined, while incarceration, out-of-wedlock births, dependency and other indicators of social pathologies rose.

Yet, the past decade has not been an unalloyed disaster for The Forgotten Half or for all young people. In the chapters that follow, we shall encounter many large and small victories on behalf of our young people and the blossoming of many hopeful initiatives that hold promise that many of our younger citizens, through hard work, responsible action, favorable labor market conditions and increased public and private supports, *can* escape the dire circumstances that cause so many older adults to "forget" the young and avert lending them a helping hand up out of poverty and neglect.

In particular, our chapter authors will survey what has happened over the past decade in American public opinion, families, communities, schooling, preparation for employment, postsecondary educa-

Chapter One The Forgotten Half Revisited

tion, national service and youth development. They will conclude their individual chapters with personal visions of a nation in which youth and young families will no longer be "forgotten" but, rather, make their positive contributions to our national well-being.

"The arena of national politics is dispiriting.

Pit bull partisanship. The sleight-of-hand of the image manipulators. Politicians walking the tightrope over an angry electorate...

The problems are frightening but in themselves are not as perplexing as the questions they raise concerning our capacity to gather our forces and act. The prevailing mood is cynicism. To mobilize the required resources and bear the necessary sacrifices calls for a high level of motivation. Is it possible that our shared values have disintegrated to the point that we can no longer lend ourselves to any worthy common purpose?"

— John W. Gardner. *National Renewal.*
Washington, DC: Independent
Sector/National Civic League, 1995.

Figure 1-22: Number of 18-24 Year-Old Civilians, by Highest Level of Educational Attainment and Race/Ethnic Origin, March 1988 and March 1997
(in thousands)

	1988	1997	Absolute Change	Percent Change
TOTAL	25,811.4	24,833.8	-977.6	-3.8
High School Student	1,993.5	2,493.0	499.5	25.1
Postsecondary Student	7,167.8	8,171.5	1,003.7	14.0
Less than 12 Years Completed	3,674.6	3,332.1	-342.5	-9.3
12 Years Completed	8,728.4	6,333.2	-2,395.2	-27.4
13 or More Years	4,247.1	4,504.0	256.9	6.0
White, non-Hispanic	18,796.3	16,451.6	-2,344.7	-12.5
Black, non-Hispanic	3,508.5	3,550.6	42.1	1.2
Hispanic	2,642.1	3,605.5	963.4	36.5
Other, non-Hispanic	864.5	1,226.1	361.6	41.8
FORGOTTEN HALF, TOTAL	12,403.0	9,665.3	-2,737.7	-22.1
White, non-Hispanic	8,386.8	5,612.2	-2,774.6	-33.1
Black, non-Hispanic	1,947.5	1,641.5	-306.0	-15.7
Hispanic	1,794.0	2,075.6	281.6	15.7
Other, non-Hispanic	274.7	336.0	61.3	22.3

SOURCE: March 1998 and March 1997 Current Population Survey, tabulations by CLMS.

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Mangum, Garth, Stephen Mangum and Andrew Sum. *A Fourth Chance for Second Chance Programs*. January 1998.

Sum, Andrew and others. *A Generation of Challenge; Pathways to Success for Urban Youth*. June 1997.

Sum, Andrew, Neeta Fogg and Neal Fogg. *Out-of-School, Out of Luck? Demographic and Structural Change and the Labor Market Prospects of At Risk Youth*. May 1997.

Sum, Andrew, W. Neal Fogg and Robert Taggart. *From Dreams to Dust: The Deteriorating Labor Market Fortunes of Young Adults*. August 1996.

"Yet, the past decade has not been an unalloyed disaster for *The Forgotten Half* or for all young people. In the chapters that follow, we shall encounter many large and small victories on behalf of our young people and the blossoming of many hopeful initiatives that hold promise that many of our younger citizens, through hard work, responsible action, favorable labor market conditions and increased public and private supports, can escape the dire circumstances that cause so many older adults to 'forget' the young and avert lending them a helping hand up out of poverty and neglect."

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10

Divider Title: _____

When Is the CTS?

Students

- **Community College Students - AAS Level**
 - **Pilot Colleges: Hagerstown MD, Central Carolina SC, Sinclair OH, Ivy Tech IN, Burlington NJ - June 1999**
 - **5-6 Others - Maybe June 2000 (NSF Grants)**
- **High School Students - Senior Level**
 - **Baltimore MD - June 2000 (ED Grant)**

When Is the CTS?

Current (Incumbent) Workers

- **Welfare-to-Work**

- 1st Pilots: Catonsville MD, Indian River FL, Portland ME - September 1999
- 2nd Pilots: 6-7 Others - June 2000 (DoL Grant)

- **Members of Joint Union Management Training Programs**

- 1st pre-pilots - Maybe 1/1/2000

What Could be Done by June 2000?

- **Nationwide Job Corps**
- **2-3 State Systems for All Groups**

The End

The SCANS Skills

Workplace Competencies

Resources: Allocate time, money, material, staff and space

Interpersonal: Work on teams, teach others, interact positively with customers

Information: Collect, evaluate, interpret, and explain information to co-workers, peers, or customers

Systems: Understand social organizations, and technological systems, monitor and correct performance, design or improve systems

Technology: Select equipment and tools, apply technology to specific tasks, maintain and troubleshoot equipment

Foundation Skills

Basic: Reading, writing, mathematics, and arithmetic

Thinking: learn, reason, think creatively, solve problems

Personal Qualities: Responsibility, self-management, self-esteem, sociability, integrity

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Johns Hopkins University
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Funding to develop the Career Transcript System is provided through grants from the National Science Foundation and the US Departments of Labor and Education. It is currently being piloted in Baltimore City Public High Schools and in community colleges across the country.

SCANS/2000

SCANS
2000

Career Transcript System

JOHNS HOPKINS
UNIVERSITY

The Career Transcript System

The SCANS 2000 Center at the Johns Hopkins University invites you to participate in its Career Transcript System. Almost a decade in the making, this five-part system offers educational institutions a way to assure employers that its graduates are ready for a successful career. The System uses a "Career Transcript," documenting students' growing ability to work in teams; solve complex problems; understand what's needed for quality; allocate resources; acquire, evaluate and communicate information; understand systems; and use technology.

The word *transcript*, rather than certificate, is used to connote the idea of life-long learning – a record of continuous improvement. The record applies to all people who are in or will enter the workforce. It starts with those entering the workforce for the first time — high school students and Welfare-to-Work participants, can be used by community college students earning an Associate degree, and extends to college graduates returning for professional development mid-career. It will be completed only at retirement.

Used synergistically, the five components of the System can provide your institution with an innovative way to blend academic and career education. This departs from standard methods in both fields – being more relevant than traditional academic education and much broader than traditional vocational courses. The academic institution's top administrators must commit to this transformation of teaching and learning if it is to succeed. Faculty will not make the needed change unless leaders with vision give them continuous support.

SCANS is the acronym for the Department of Labor Secretary's Commission on Achieving Necessary Skills. In 1991, the commission brought together employers, educators and others interested in developing workers ready for the 21st Century to document the skills those workers would need to succeed in the changing economy.

1 Professional Development for Faculty Your faculty learn to implement project-based, collaborative learning in their classrooms through face-to-face and Internet-based training & communication.

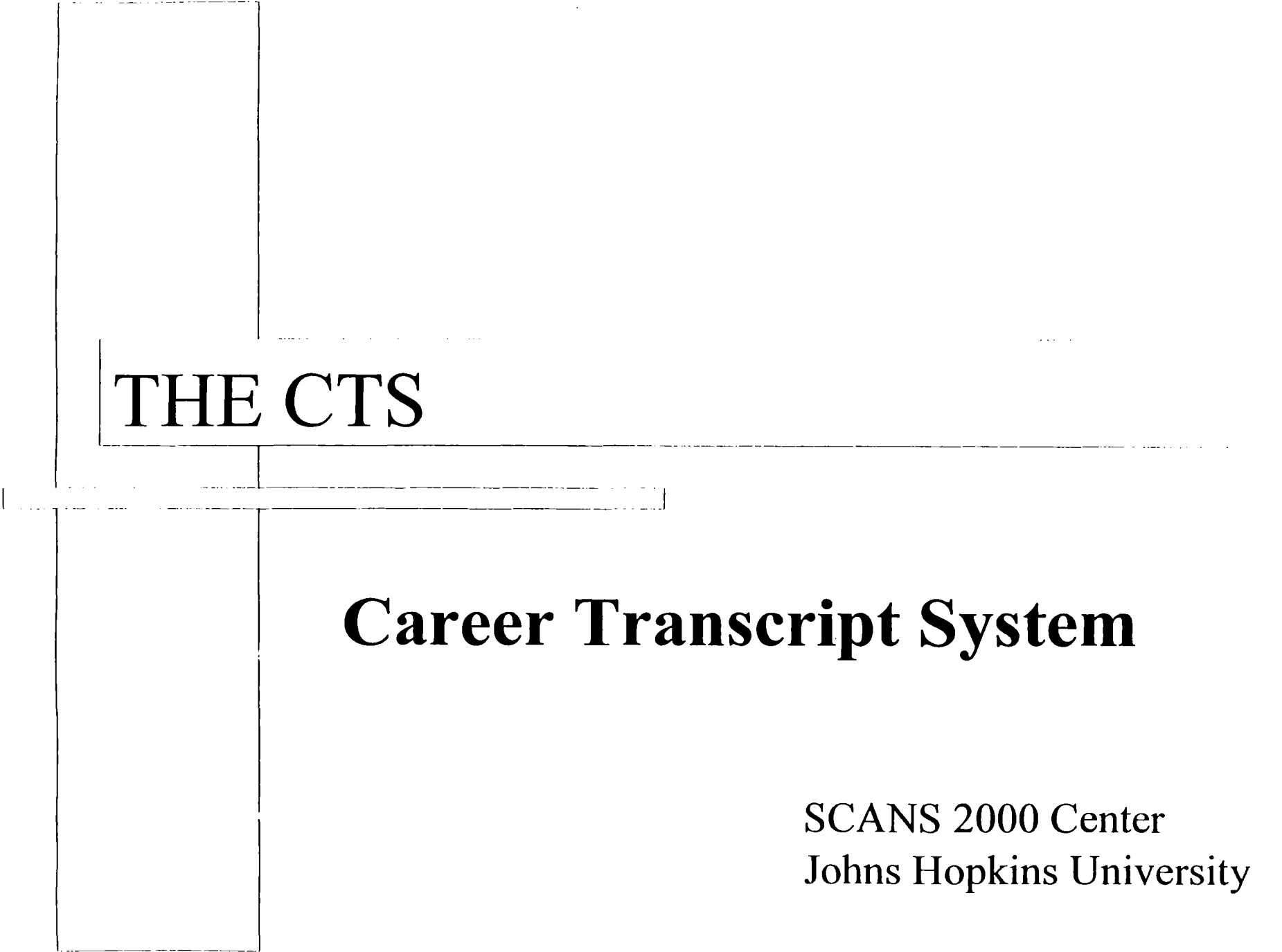
2 Professional Development for Workplace Liaisons Training your staff to become industry experts is key. They help work supervisors develop learning rich workplaces by connecting the employer and the college.

3 Teaching Tools Students use eight CD-ROM modules which challenge them to solve complex, real-world problems through role-play as employees in high-demand industries.

4 Assessment Strategies The System provides a way to *assess, document, and certify* skill development over time through standardized, statistically reliable, assessments and a subjective assessment using a SCANS-based rubric. This makes it possible to assess presentations, solving problems, working in teams, and other process skills that are usually hard to assess.

5 Documentation A Community Human Resource Database (CHRD) houses data which results in the Career Transcript showing a person's competency levels in the SCANS skills on the job, in the workplace, and through life experience.

The Five Components



THE CTS

Career Transcript System

SCANS 2000 Center
Johns Hopkins University

Vice President's Summit

- **“Achieving the Potential of the Workforce Investment Act”**
- **“New Roles for Community Colleges”**
- **Labor-Management Partnerships, Small Business, Laid-Off Workers,**
- **Workplace-Based Training, Technology and Workplace Skills**

Gore's Vision Statement

Leaving No American Behind

- **21st Century Skills for All**
- **Life-long Learning**

What Does The CTS Do?

The Career Transcript System Provides:

- **Students and Workers with a Certified Record of Their Career Skills**
- **Employers with a Means to Evaluate Current Workers and Potential New Hires**
- **Educators with a Way to Document the Acquisition of Career Skills**
- **Supervisors with a Way to Document Employee Growth and Development**

What Are the Goals of the CTS?

- **Increase the Acquisition of Career Competencies by Students of All Ages - *Is it on the Test? Will it Help My Career?***
- **Increase the Acquisition of Career Competencies of Workers - *Does My (Current or Future) Boss Know and Care?***
- **Increase the Competitiveness and Productivity of American Firms - *Do my employees have the skills I need to remain competitive?***

Why the CTS?

- **Increase Skills to Prevent Inflation with Productivity Growth, Not Unemployment**
- **Increase Worker Flexibility by Providing Him/Her With a Believable Record of Competencies**
- **Increase Competitiveness in a Knowledge Economy by Giving Firms Reliable Data on Their Human Resources**

What Is The CTS?

- **An Internet-based Data Base of Individuals' Career Skills (Interpersonal, Analytical, Technical) that are Certified by a Community College, One-stop, or Other Community Institution.**
- **Includes Assessment Devices, Teaching Materials, Faculty Development, and Supervisor Training**

Who Wants the CTS?

- **Employers -**
 - **SCANS, Focus Groups, Indian River, SHRM**
 - **Irrelevant Academic Transcript, Unreliable Resume, Uncommunicative Previous Employer**
- **Unions**
 - **Joint Labor Management Programs, Morty Bahr: “Guarantee Employability, Not Employment”**
- **Innovative Educators, AACC**

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11

Divider Title: _____

Contract No.: EA93024001
MPR Reference No.: 8176-151

**Addressing Literacy
Needs at Work:
Implementation and
Impact of Workplace
Literacy Programs**

Final Report

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Submitted to:

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EXECUTIVE SUMMARY

INTRODUCTION

The need to remain economically competitive in a changing global economy has led to widespread concern in recent years about the low literacy levels of many American workers. About 40 percent of the nation's workers, according to recent estimates, have limited abilities to perform basic reading, writing, and math tasks that are likely to be required by their jobs (Sum, forthcoming). Communication skills that include speaking ability also have become a principal requirement of successful employment in both the service and manufacturing sectors. The fact that increasing numbers of workers in the U.S. were born abroad and have limited proficiency in English compounds the challenge of improving many workers' literacy skills.

One strategy for developing workers' basic skills is known as workplace literacy. Rather than teaching literacy skills in the abstract, workplace literacy focuses on teaching literacy skills that workers need to do their jobs. A key aspect of workplace literacy is that the curriculum is based on job task analyses and instruction makes use of materials from the work site.

With the goal of increasing the number of workplace literacy programs nationwide and developing models that could be followed by other workplace programs, in 1988 the U.S. Department of Education (ED) initiated a federal demonstration grant program known as the National Workplace Literacy Program (NWLP). The program was designed to emphasize (1) contextualized, job-specific instruction in basic skills; (2) joint governance through partnerships between employers, education providers, and employee organizations; and (3) attention to the needs of individual workers. It was anticipated that the program could benefit participating workers and, in turn, their employers.

This is the final report of a national evaluation of NWLP partnerships, conducted by Mathematica Policy Research, Inc. (MPR) and its subcontractor.¹ Our in-depth study was guided by two major research objectives: (1) to describe the implementation and institutionalization of workplace literacy programs and (2) to assess the effects that workplace literacy instruction has on participating workers--and in so doing, demonstrate how rigorous research designs can be implemented to evaluate program impacts. We conducted our research in three local and two state-level partnerships funded in 1994, the last time NWLP grants were awarded. Brief descriptions of these diverse sites are provided in the accompanying box.² Additional details on our research methods are provided at the end of this executive summary.

¹COSMOS Corporation served as the subcontractor during the first three years of the study; in the fourth year Abt Associates became the subcontractor.

²Because of confidentiality agreements with the partnerships, in this report we do not identify the five sites, but rather refer to them by number only--the three local sites are referred to as Sites 1, 2, and 3; the state-level programs are referred to as Sites 4 and 5.

CONCLUSIONS FROM THIS STUDY

Results from this study demonstrate that when appropriately implemented, workplace literacy programs can have short-term impacts on workers of a fairly broad scale. These outcomes range from literacy-related behavior at home to performance on the job. At the same time, it is important to note that most of the 1994 NWLP-funded workplace programs did not exhibit the features that appeared linked to the impacts observed in the in-depth study. The overall message from this study is that while it is possible to implement and institutionalize effective workplace literacy programs, doing so will present challenges to employers, program leaders, and policy makers.

- ***Program Effectiveness Is Associated With Instructional Time.*** Our results suggest that instructional time is a potentially important element affecting overall program effectiveness. Substantially increasing instructional hours, however, will require major changes in the way most workplace literacy programs are constituted. Typically, workers in the NWLP programs amassed only modest amounts of instructional time. Structural forces in the workplace and on workers' personal lives will need to be overcome to increase workers' hours of instruction. Educating employers about the value of additional hours and actively coaching workers to enter appropriate follow-on courses in local colleges may help to increase instructional time.
- ***Implementation Is Aided By Experience and State/Local Infrastructure.*** Initiating local workplace literacy programs is less demanding than keeping them functioning smoothly over time. A successful, on-going workplace literacy program requires a considerable investment of staff time, flexibility in adapting to a range of circumstances, training of quality instructors, and guidance from experienced professionals. Staff with years of experience found meeting these challenges less onerous. Where an infrastructure was in place through networks of experts affiliated with community colleges and with state agencies, local programs staff also found it easier to tackle these challenges.
- ***Institutionalization Is Associated With Workplace Incentives for Employers.*** In the absence of public support, employers' commitment of funds is critical in ensuring that local programs continue. Employer financial support was more evident in organizations that were restructuring workers' jobs, and was less evident in work sites that accommodated workers' skill deficits. Public or other private sources of funding may be necessary to sustain programs for workers whose job performance does not depend on mastery of many basic literacy skills.

LESSONS ABOUT THE IMPLEMENTATION AND INSTITUTIONALIZATION OF WORKPLACE LITERACY FROM FIVE SITES

Implementing Workplace Literacy

At the local level (including the local partnerships formed under the two statewide programs), the experience of the in-depth study sites point to several common areas requiring vigilant attention when establishing and operating workplace literacy programs.

THE FIVE IN-DEPTH STUDY SITES

- **Site 1.** This program focused on providing English-as-a-Second-Language (ESL) instruction primarily to Asian immigrants, nearly all of whom were female, working in the garment industry in a large city. Classroom-based instruction was offered on weekends at the offices of the main partner, an organization with a long history of teaching literacy skills and providing job training. The other partners were a garment workers union and an association of garment manufacturers; no employers were directly involved. The 1994 grant was the partnership's third consecutive one under the NWLP.
- **Site 2.** This workplace literacy program was developed to serve employees of a single employer, a metal processing company located in a semi-rural area. Workers attended classes, held at the plant during working hours, that taught skills such as math, reading, writing, communication, problem-solving, and decision-making. A community college and a literacy organization were also involved in the partnership. The 1994 NWLP grant was this partnership's first.
- **Site 3.** The goal of this program was to improve the English language skills of Hispanic immigrants working in food processing and agriculture-linked businesses. During the grant period, the lead partner, a nonprofit employment and training organization, teamed with several companies spread over a fairly large geographic area. Classes were typically held at the work sites, immediately after the workday. The 1994 NWLP grant was this partnership's first.
- **Site 4.** This state-level program, led by the state community college board, involved the creation of local partnerships between an education provider (usually a local community college) and one or more companies. The common goal of the local projects was to improve literacy skills of workers in businesses that have adopted total quality management (TQM). Instruction focused on a wide range of skills, such as reading, writing, math, problem-solving, and ESL. The 1994 grant was the partnership's third consecutive one under the NWLP.
- **Site 5.** This site's state-level partnership involved local partnerships between 11 technical colleges and 20 manufacturing firms. Curriculum and instruction were tailored to the needs of employees at each participating company, with the program emphasizing self-paced, individualized learning through services and instructional materials at on-site learning centers. At the state level, the main partner was the state technical college board; other key players were a union, a university research center, and a statewide association of employers. The 1994 NWLP grant was the fifth for this partnership.

- ***Employer Participation and Support.*** Program staff typically needed to cultivate employer support and participation throughout the operation of a program. This involved a continuous process of refining goals and objectives for the work site, distinguishing workplace literacy instruction from job training and personal development, adapting to organizational and production changes in the workplace, and gaining support from supervisors and employees.
- ***Time Necessary for Curriculum Development.*** Developing workplace curricula demanded a substantial investment of instructors' time. Workplace literacy clearly is not a job limited to teaching time. The task of curriculum development was somewhat less time-intensive for instructors at sites with greater experience in workplace literacy. Instructors' and employers' perceived need for curriculum that suited individual workplaces made externally produced content of limited value.
- ***Instructors' Qualifications.*** Although most instructors had some teaching experience from other jobs, they still had to develop competencies specifically associated with workplace literacy, such as building organizational support and marketing the program. This was typically accomplished through on-the-job experience and mentor relationships, rather than through formal training.
- ***Constraints on Instructional Time.*** The workplace typically imposed constraints on instructional time. For example, some employers wanted to hold down costs for paid release time and minimize interference with production schedules. Also, scheduling classes for too many weeks could reduce employees' interest. Some sites tried to compensate for such limits by creating opportunities for participants to practice their skills outside of classes, through take-home exercises and audio cassettes.
- ***Information on Program Effectiveness.*** Across sites, employers relied on trusted staff in the workplace and measures of program inputs to assess how useful their programs were. Workers' performance on instructor-developed tests, attendance data, and anecdotal information were the main types of information used to assess programs' effectiveness. Standardized literacy tests were infrequently employed tools for assessing how well workers mastered skills taught in particular courses.

Institutionalizing Workplace Literacy

Because programs were started with federal funds, questions emerge about their ability to endure with other sources of support. The prospects for workplace literacy programs' early continuation beyond the federal demonstration grants are promising. Some form of workplace literacy instruction was planned at most of the local partnership sites after the federal grants. Continuation depended primarily on employers' commitment of their own funds.

- Nearly two-thirds of the 37 local programs examined in this study were slated for continuation for at least one year.

- The 30 local workplace programs located in the two states with a statewide workplace literacy strategy in place experienced rates of institutionalization of 70 and 75 percent. This suggests that statewide infrastructure can be a factor important to continuation.
- Employers whose workers reported less need for using English language skills to do jobs were less likely to continue ESL-oriented workplace literacy programs with their own funds (Sites 1 and 3). In comparison, employers seeking to gain international certifications of quality appeared more likely to commit company funds to continue the workplace literacy programs (Sites 2, 4, and 5).

How long workplace literacy programs will continue after this initial support is unclear. Information from several continuation sites indicated that while these programs would continue, they were likely to change in response to employers' and employees' preferences, and the elimination of federal requirements. The changes involved programs becoming shorter in duration and including more job training and personal development components.

The Role of State and Local Infrastructure

For workplace literacy programs to endure and expand beyond the federal grants, the development of an infrastructure will be important. Infrastructure links interested employers (or employer associations or unions) with a readily available source of information about workplace literacy, not to mention the basic elements of such services--instructors and curriculum. It has two components: (1) state-level activities and leadership and (2) local providers of technical expertise and staff. Two state-level partnerships that sought to build a system of workplace literacy in their states' two-year colleges (Sites 4 and 5) provided an in-depth picture of infrastructure issues.

- ***Common Infrastructure Activities/Functions.*** Both sites carried out common activities, including (1) defining and disseminating a model of how workplace literacy programs should ideally be structured and operated; (2) providing professional development activities for instructors, such as through mentor relationships and effective-practices guidebooks; (3) cultivating networks of professional staff, such as through regular meetings and shared technical assistance; (4) generating data on program participation; and (5) helping to resolve problems and conflicts that might arise at the local level, such as the need to gain the support of front-line supervisors.
- ***Core Process Versus Core Curriculum.*** Site 4 and Site 5 had somewhat different goals and strategies concerning infrastructure development. Site 5 focused on refining a framework of policies and procedures to expand workplace literacy programs throughout the state, specifying steps such as the analysis of literacy skills for various jobs and the use of steering committees. Site 4, in contrast, formed a coalition of experienced workplace instructors from a handful of colleges to develop a curricular model addressing the skills necessary to carry out TQM reforms in a variety of workplaces. Based on the experiences of the two sites, it appears that developing a core curriculum is more difficult than focusing on a standard process that allows different curricula to emerge.

TABLE I
OVERVIEW OF SIGNIFICANT PROGRAM IMPACTS, BY SITE

Outcome	Site 1	Site 2	Site 3
Workers' self-rated ability to:			
read English	✓	✓	
understand English	✓	✓	
speak English	✓		
write English	✓		
use math	✓		
solve problems/use reasoning	✓		
Standardized literacy assessment	✓		
Changed educational or career goals	✓		✓
Planned to take:			
a computer course	✓		
courses leading to a 2- or 4-year college degree	✓		
a home-study course	✓		
Signed up for another course	✓		
How often workers read (at home):			
letters or bills	✓		
coupons	✓		
labels on food	✓		
food recipes	✓		
instructions	✓	✓	
street signs	✓		
notes from a teacher or school	✓		
TV Guide or other television listing	✓		
How often workers write (at home):			
forms or applications	✓	✓	
appointments on a calendar		✓	
Workers' self-reported ability to work as part of a team	✓	✓	
Worker speaks English on the job	✓		
Works as part of a team on the job			✓
Benefits received on the job: ^a			
paid sick leave	✓	b	
paid holidays	✓	b	
health insurance	✓	b	
Number of days missed work in last 12 months because of a job-related accident	b		✓
Supervisor ratings of how well worker performs tasks:	b		
arrive on time, ready for work		✓	
follow supervisor's verbal instructions			✓
ask if coworkers or customers need help		✓	
answer simple questions related to the job		✓	
give clear directions/instructions to others		✓	✓
complete a task on time		✓	

NOTE: All impacts shown were significant at the .10 level using a one-tailed test.

^aAny short-term impacts on these outcomes are produced by a program's direct emphasis on benefits during instruction or counseling.

^bUnable to measure or to estimate effect for this outcome at this site.

- **Keys to Success.** Three features surfaced as important in state-led efforts to foster adoption of workplace literacy programs: (1) decentralization, (2) flexibility, and (3) support from local colleges. Decentralization is necessary to accommodate the traditional autonomy of community/technical colleges and to reinforce local adaptability. Flexibility is critical for responding to unique local situations, such as employer preferences. Support from colleges requires an organizational commitment of resources and leadership.
- **Local Colleges and State-Level Organizations.** Continuation of state-level infrastructure will depend largely on state funds, while continuation of local college infrastructure will be fueled by employers' demands for assistance, public subsidies, or both. Site 4 had no ongoing sources of state support, whereas Site 5 maintained a state grants program similar to the NWLP. The presence of state support was linked to better prospects for the continuation of state and local infrastructure.

PROGRAM IMPACTS ON WORKERS AT THE THREE LOCAL SITES

Worker Outcomes

Literacy instruction linked closely to the workplace can lead to a variety of positive short-term outcomes for participants.³ It can change workers' career and educational plans, alter their literacy habits at home, and improve their literacy skills and job performance. Table 1 displays all the program impacts we detected, by site. Most of the impacts were small or modest in magnitude, ranging from .2 to .4 standard deviations.⁴ Importantly, while all three sites had some impacts, most impacts were heavily concentrated in one site. (The unique features of this site and the implications of this finding for other workplace literacy programs are discussed in the subsequent part of this overview.)

- **Changes in Workers' Plans and Skills.** Workplace literacy can lead workers to change their career and educational plans, and can improve their literacy skills. For example, after NWLP courses ended, participants at Site 1 were more likely than nonparticipants to express an interest in taking other courses. In addition, participants rated their own literacy skills--such as reading and writing English--higher after courses ended than did nonparticipants. We also found rather substantial literacy skill improvements, at Site 1, as measured by a standardized literacy assessment. Finally, compared with nonparticipants, after courses ended participants in some sites reported engaging more frequently in certain literacy tasks at home, such as reading a variety of materials.

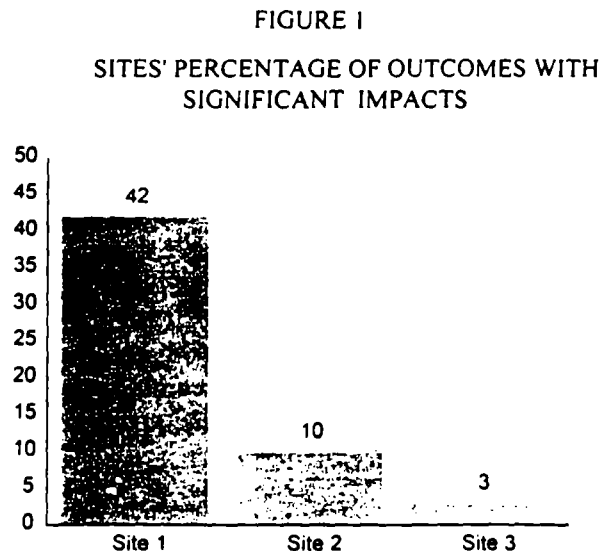
³Since employers were reluctant to keep applicants out of courses for longer than one or two course cycles, this study could not examine whether workplace literacy had any impacts on long-term outcomes.

⁴The following interpretation may make the magnitude of these program impacts easier to grasp: A difference of .2 standard deviations indicates that the average score for workers in the treatment group is higher than the scores of almost 60 percent of those in the control group; a .4 standard-deviation difference tells us that the average score among treatment-group members exceeds the scores for 66 percent of the control-group members.

- **Job-Related Outcomes.** Workplace literacy can have significant impacts on workers' experiences and performance on the job. After courses ended, participants at two sites experienced positive impacts on their teamwork skills and were also more likely than nonparticipants to report receiving various job benefits, such as paid holidays and health insurance. In addition, according to employers at those sites, participants missed work less often due to accidents and outperformed nonparticipants on several tasks, including giving clear directions to others.

Factors Associated with Differences in Site Effectiveness

Site 1 outdistanced the other two sites examined in the in-depth study in the number of impacts it had on workers (see Figure 1). More instructional hours and a combination of other features may be responsible for Site 1's greater level of effectiveness.



- **Importance of Instructional Hours.** Two types of evidence suggest that instructional time may be a key to overall program effectiveness. First, sites where participating workers received more average hours of instruction had more program impacts across a broad range of outcomes. Site 1, where workers received an average of about 43 instructional hours in the first course attended, had the greatest number of impacts; Site 2, where workers received slightly less instruction (31 hours), had impacts on fewer outcomes; and Site 3, where workers received an average of just 19 hours of instruction, showed impacts on the fewest outcomes. Second, statistical analyses of data from all three sites showed that increases in the hours of instruction that individual workers received were associated with greater gains on 10 outcomes, including workers' self-reported ability to use math and how often they read various materials at home.

- ***Other Influential Factors.***

Differences between sites in the number and type of program impacts observed also may be related to numerous factors other than instructional hours, including program objectives and course scheduling. Although this evaluation could not statistically disentangle all these possible influences on program effectiveness, several practices distinguished Site 1 from the other two sites and may be linked to this site's greater effectiveness (see box).

Promising Factors in Site 1's Effectiveness

- Workers completing an average of 43 hours of instruction in initial course and 66 hours of instruction over an 18-month period.
- Emphasis on employees' advancement to jobs better than their current job.
- Scheduling courses when employees were not fatigued from work and including child care plus reimbursement of transportation costs.
- Following a highly structured curriculum that incorporated several modes of instruction and that was developed over a period of years by experienced staff.
- Forging a close alignment between instruction and a standardized literacy test.

The program features in Site 1 that distinguished that site suggest many differences from other workplace literacy grantees funded by the NWLP. These included a heavy emphasis on the advancement of the individual worker that was largely independent of employers' immediate involvement. (This became a detriment for continuation of the program once public sources of support were no longer available.) The program in Site 1 also offered highly structured classes on weekend days when workers' attention was less centered on the workday. Finally, Site 1 had developed its program over a number of years, resulting in a highly experienced staff and a very carefully structured mix of instructional experiences involving English use in the garment industry.

STEPS FOR VALIDATING STUDY FINDINGS

Research Framework for Extending Study Findings

Several lessons emerge from this exploratory evaluation about how studies of workplace literacy might be designed and conducted. It is essential to define a framework to link future studies so they can have maximum use in validating and extending the findings in this study. This framework will permit others to examine program impacts across a variety of sites and by revealing the circumstances under which various program elements are most effective.

- Evaluations should be based on random assignment and compare the outcomes of treatment and control groups to rule out other possible influences on worker outcomes; if the present study had simply compared participants' skills before and after courses, it would have produced very different--and inaccurate--conclusions.

- Implementing validation studies will require public policy support and incentives to encourage sites' participation. Employers who have already decided to participate in workplace literacy efforts are unlikely to invest in evaluations of the type required to extract generalizable findings; employers' find it sufficient to rely on broad indicators like participation and anecdotal information from trusted sources within their own organizations to determine a program's success.
- Data collection should not rely heavily on local program staff who have other priorities to accomplish.
- A nationally coordinated study of workplace literacy should use procedures, such as meta-analysis, that allow synthesizing results across different sites. The meta-analysis should strive to incorporate measures of a core set of outcomes, many of which were used in this study. Standardized literacy tests, however, should be used only in situations where they closely align with the curricula.
- Identification of possible long-term effects produced by workplace literacy programs will require the longitudinal collection of information across a nationally representative sample of employed adults. This undertaking will require care in constructing items that yield data about adults' participation in workplace literacy, the characteristics of that instruction, and other educational and employment aspects of their lives.

STUDY METHODOLOGY

To describe the implementation and institutionalization of workplace literacy programs, the evaluation team conducted case studies of a purposively-selected sample of five diverse NWLP projects--three local and two state-level partnerships. The case studies involved two visits at each partnership, conducted 12-18 months apart, to interview program staff, employers, and workers.

To assess the effects that workplace literacy instruction has on participating workers, MPR implemented an experimental design at the three local sites and randomly assigned course applicants to either a treatment or control group. The treatment group was allowed to enroll in workplace literacy immediately; the control group had to wait at least until the next course cycle began. Data on many potential short-term outcomes were collected from workers, employers, and supervisors, typically both before classes started and after they ended. Program impacts were computed by comparing the average outcome for the treatment group with the average outcome for the control group.

In addition to the rigorous impact analyses, we also explored the relationship between hours of instruction and worker outcomes. Specifically, we compared average hours of instruction received with sites' overall effectiveness and also used an analytic model to isolate the effects of hours of instruction on participating workers' outcomes.

In conducting various analyses and describing the five in-depth study sites, we incorporated data from the National Workplace Literacy Information System (NWLIS), a computer database for

gathering data from NWLP partnerships, established as part of the overall national evaluation of all 45 grantees funded by ED in 1994.⁵

⁵Descriptive information on all 45 partnerships--including the partners involved, courses and instructors, and learners--is provided in an interim report from the national evaluation; see Moore, Mary T., David E. Myers, and Tim Silva, "Addressing Literacy Needs at Work: A Profile of Institutions, Courses, and Workers in the National Workplace Literacy Partnerships." A Report Prepared for the U.S. Department of Education, Planning and Evaluation Service. Washington, DC: Mathematica Policy Research, Inc., 1997.

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Austin, Texas: Taking a High Technology Path to Economic Development

by

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Austin was founded as the site of the capital of the Republic of Texas in 1839. For much of Austin's history, its economy was known as a center of government employment and a college town, the location of one of the state's flagship universities. State government agencies provided a secure and growing base of employment, but the city was considered slightly disadvantaged in not having any part of the Texas signature industry—petroleum. A century and a half later, the situation has dramatically changed. Petroleum is on the decline in Texas and Austin's economy has become a center of high technology in a global knowledge-based economy, offering an exemplar for the state and propelling the Austin metropolitan area into one of the largest and fastest growing in the nation.

Austin, Texas became a center of electronics and information technology (IT) faster than any other region in America, including Silicon Valley in Northern California and Route 128 in the Boston, Area. As of 1998, Austin was home to more than 800 software development enterprises and one of the primary American centers of semiconductor production. Several well known, progressive firms with names closely identified with information technology have located research and/or production facilities in the Austin area, including AMD, Applied Materials, Dell Computers, Cypress Semiconductors, IBM Corporation, Intel, Motorola, National Instruments, Raytheon, Siemens, Sollectron, SAMSUNG, Texas Instruments, 3-M Corporation, and Tokyo Electron.

Notably Austin has long been on an impressive growth path. The population of Austin has doubled every 20 years since 1880 with only one exception (between 1900 through 1920). Remarkably, growth is continuing at this same pace. During 1997, Austin was second fastest growing metropolitan area in the US; only the Las Vegas area grew faster. Even more impressive has been Austin's robust economic growth. Employment has expanded at a rate double the population growth during various "boom" periods over the past two decades; whereas population grew at a rate of three percent per year, the number of jobs was expanding at six percent annually. Unemployment rates in Austin consistently have ranked as either lowest or next-to-lowest of any local area in Texas for more than two decades. Moreover, Austin's economic outlook remains favorable into the long-term future, according to analysts who have studied it most closely (Angelou Economic Advisors, Inc, 1997; Greater Austin Chamber of Commerce, 1997). Moreover, Austin has reached a stage of "take off" with increasing entrepreneurial activity and availability of venture capital.

Conscious Strategies, Fortunate Circumstances

Austin's economic success has achieved in part through intentional strategies to foster growth in the policies and actions taken by the Greater Austin Chamber of Commerce, government officials, and other leaders in the region. Austin has been known nationally for its collaborative policymaking by local officials, who have been able to enlist support, when needed, from the governor of Texas and other state officials and tangible assistance from The University of Texas at Austin in campaigns to attract specific prospects considering locating in the region.

The economic development efforts of the Greater Austin Chamber of Commerce have been focused by two strategic planning studies, which were commissioned and published by the Chamber in 1985 and in 1998 (SRI International, 1985 and ICF Kaiser International Economic Strategy Group, 1998). These reports outlined the options available to Austin. The conclusions reached by these studies achieved widespread consensus and helped to provide direction to Austin's business community.

Austin's conscious strategy for economic growth has been characterized by certain features, including the following:

1. Leadership from business. The Austin business community took the lead in attracting industry. Others, including the City of Austin, Travis County, and various Texas State government agencies, have played supportive and collaborative roles.
2. Focus. The campaign has been targeted at firms who sold more than 50 percent of their services outside of Austin. Since the publication of the 1998 strategic planning study, efforts of the Chamber have narrowed to develop businesses in ten specific industry clusters: (1) electronics, (2) semiconductors, (3) computers and peripherals, (4) software, (5) multi-media, (6) biomedical products, (7) logistics and distribution, (8) transaction services, (9) film, and (10) music.
3. Research collaboratives. Special efforts were made to attract high-profile industry research collaboratives, especially the privately-sponsored Microelectronics Computing Consortium (MCC) in the electronics industry which located in Austin in 1983 and SEMATECH, a public-private research consortium formed by the federal government and several semiconductor manufacturing firms to meet the challenge posed by Japanese producers who were increasing their market share. SEMATECH chose to locate in Austin in 1988. Following the lead of these consortia, several of their member firms and their supplier companies decided to locate major facilities in Austin.
4. Postsecondary education. The development of research and education at The University of Texas at Austin has been a primary factor in the knowledge-based economy, especially colleges in engineering, computer sciences, and business administration.
5. Increasing attention to entrepreneurial development. Conscious efforts have been made to develop a climate to facilitate entrepreneurial activity, especially in high technology industry. Austin established one of the first technology incubators in the United States. It was initiated by Dr. George Kozmetsky, who served as dean of the University of Texas School of Business and founded Innovation, Creativity, Capital (IC² Institute), now a world-renowned research facility specializing in issues of technology and the global economy. A recent national study involving researchers at the University of Michigan and others has documented the success of technology and business incubators in fostering the creation of new firms and jobs (Molnar, et al, 1997). Providing a forum for education and encouraging information-sharing among the aspiring entrepreneurs whose firms are co-located in the same building complex are integral features of the Austin technology incubator model.
6. A regional orientation. The Greater Austin Chamber of Commerce has largely ignored political boundaries in its efforts to attract industry to the region.
7. Encouragement of communication, networking and collaboration. The Chamber holds a wide variety of functions to promote networking among its membership. The IC² Institute established the Austin Software Council to facilitate communication among software developers and sponsors a variety of functions and strategies to promote dissemination of knowledge.

Perhaps equally as instructive as the techniques used are those not relied upon by Austin. For example, property tax abatements have been used only sparingly in the Austin area and in no cases have school district taxes been abated. The rare and selective use of tax abatements is especially interesting because the subject of tax abatement has received

considerable attention in American literature on incentives influencing industrial location (see for example, Fisher and Peters, 1998). It should be acknowledged, however, that Texas remains a generally low-tax state and one of the few states without a state income tax on individuals.

Admittedly Austin's robust growth has also been facilitated in part through good fortune, including such factors as natural attractiveness, an abundant supply of good water, an attractive quality of life, good climate, historically low wages, and (until recently) low-priced housing and low cost-living expenses.

Learning Systems

A key factor in Austin's growth has been the development of learning systems—especially at the postsecondary level. Austin has enjoyed special advantages in the production of workers with college degrees. One survey made in the early 1990s revealed more than 100,000 individuals enrolled in courses in the area's nine colleges and universities with more than 15,000 college degrees being produced annually, as compared with only about 5,000 high school diplomas. Of these, fully 11,000 diplomas at the baccalaureate, masters, and doctoral level were awarded annually by The University of Texas at Austin, one of the nation's leading research universities. Many students who come to the region to attend college prefer to stay in the area after graduation, sometimes sacrificing opportunities for greater earnings they could achieve elsewhere or compromising their career aspirations.

Austin enjoys a reputation as a comfortable place to live, with a good environment and "high quality of life." This has facilitated the ability of firms to recruit and attract highly educated people from other areas to move to the region. Austin's population now ranks as one of the most educated in the US, as measured by years of educational attainment. In one indicator of this, Austin often ranks highest in the nation in per capita spending on books.

Counting the occupational preparation offered by local college and universities, including schools and colleges devoted to studies of business, engineering, architecture and planning, nursing, law, education, communications, and public affairs, and others, well over a billion dollars in public funding, mostly from the state of Texas, is devoted to workforce preparation. At least an additional billion in funding, from the federal government and various private sources, is invested in various research and development activities in Austin.

A more difficult challenge has been building regional learning systems to produce adequate supplies of skilled and technical workers at the pre-baccalaureate level. This form of education has lagged growth significantly. An example can be found in semiconductor manufacturing. In 1992, both Motorola and Advanced Micro Devices broke ground on building major production facilities in Austin. Within two years, these plants (or "fabs" as they are commonly called in the semiconductor industry) were in operation. However, it was not until a full year later in 1995 that Austin Community College was able to start a program with a curriculum to train semiconductor manufacturing technicians. Relative to the time taken to establish other new technical occupational programs in public schools or colleges, the implementation of the semiconductor manufacturing technician program at Austin Community College was a remarkably rapid development. It grew successfully in three short years, to an enrollment of more than 450 students in fall 1998. However, the program generally takes students at least five semesters to complete, and seventy percent of them require even long because they attend the college on a part-time basis, working to

support their families. Thus, even though the program is offered in various options and course configurations at Austin Community College, ranging from an accelerated 36-week certificate course to a full two-year associate of applied science degree course of study, the Austin Community College was able to produce no more than three dozen graduates during the 1997-98 school year—more than six years after the major expansions were announced and four years after the production facilities were in operation. Austin is now America's leading location for the production of semiconductor chips. Yet the faculty and curriculum for producing a workforce of operators and technician for the semiconductor industry are just now coming into place.

The story at the secondary school level is even more striking. In 1994, the year that the major new semiconductor facilities went into production, the Austin Independent School District, the major school district with fully one-third of the region's total school enrollment, decided to drop its only program providing technical education in electronics for the high technology industry. The instructor who had been teaching the program retired and the school district was unable to replace him at the low salary levels they were willing to offer. In addition, the program had difficulties attracting students because its courses were quite challenging but were not required for high school graduation. Finally, this program in technology and electronics was widely perceived as a program for students not intending to continue their education in college. Given the strong pro-college bias in American society and especially in Austin, this perception offered a major barrier to attracting students who could competently handle the levels of mathematics and science required for this coursework. Similar situations prevailed in computer applications, computer programming, and network administration. Thus in spring 1994, not a single program in any of Austin's ten public high schools offered students any technical preparation for working in Austin's high technology industry. At the same time, several of these same high schools were teaching students subjects such as cosmetology, automobile mechanics (in programs neither reviewed nor certified by industry), home economics, agriculture, and animal science.

Another glaring example of the sluggishness of schools to change as contrasted with the far greater speed at which business must move to survive can be found in the installation of computers in Austin public schools. A bond issue passed in a 1996 election included funding for wiring and installing computers to be used as part of the instructional process in every Austin classroom. Three years later, the task remains uncompleted. In some schools, it has not even started, and questions are arising about the adequacy of funding available to complete the work.

Noting the numerous deficiencies in preparation of an appropriate technically trained workforce for the area's developing economy, the Austin business community began mobilizing in the early 1990s. In Spring 1994, the Greater Austin Chamber of Commerce, in collaboration with the City of Austin, formed a special-purpose, industry-led, non-profit organization entitled the Capital Area Training Foundation to work as an intermediary or broker between schools and industry. This initiative was inspired in part by colleagues in Koblenz, Austin's sister city in Germany who in Spring 1994, provided a tour and briefing on the operations of the dual (apprenticeship) system in Koblenz to Mayor Bruce Todd and a sister city delegation. This visit was followed by several others, along with generous advice, guidance, and even a series of training exchanges, especially with Handwerkskammer Koblenz (Glover, March 1996).

The Capital Area Training Foundation aims to establish long-term education and workforce development solutions to address shortages in the Austin labor market. The Capital Area Training Foundation has a dual mission: to develop a skilled workforce for

Austin-area employers and to prepare youth and young adults for lifelong learning, citizenship, and career success.²

In existence for only five years, the Capital Area Training Foundation has already established a strong track record of accomplishment. It has helped to develop various high technology "career pathways" in each of Austin's high schools, offering instruction in such subjects as industrial electronics, computer-aided design, computer networking, and multimedia applications. Several of these courses offer high school students opportunities to achieve college credit while still in high school. Some of the computer laboratories and other facilities with high capital costs are operated on joint basis, used for high school students during the day and with community college students and adults in the evening and on weekends. The Capital Area Training Foundation brokered the establishment of a pilot career preparation program between the Advanced Micro Devices (AMD) Corporation, two local high schools, and Austin Community College entitled "Accelerated Careers in Electronics" or ACE. ACE features courses beginning at the second or third year of high school and extending into postsecondary education at the community college or university levels. Efforts are now underway to expand the ACE program into a regional industry-educational partnership that produces at least 1,000 graduates per year. Major industry associations including the American Electronics Association, SEMATECH, and the Semiconductor Equipment Manufacturers International (SEMI)—an association of supplier firms to the semiconductor industry—and Austin-area electronics firms are becoming engaged in this initiative.

The Capital Area Training Foundation has established steering committees in several industry sectors facing workforce shortages in the Austin labor market. Its high technology/electronics committee has blossomed into several working subgroups, including computer network administration, software development and multimedia, and semiconductors. In addition to the high technology/electronics sector, steering committees are active in the following industries: construction, criminal justice, automotive service, healthcare, and consumer services including occupations in the culinary trades and hospitality industry. New industry steering committee is emerging in environmental studies and career paths are being organized in teaching.

Wherever possible, Austin's steering committees work with and through existing industry associations, such as the Associated General Contractors and the Associated Builders and Contractors in the construction industry, the Austin Automobile Dealers Association, the Austin Hotel-Motel Association, the Texas Restaurant Association, and the Austin Software Council.

The Greater Austin Chamber of Commerce has maintained a persistent interest in workforce issues during the 1990s. In fact, workforce development has ranked as the top priority item each year since 1990 in the Board of Directors annual retreat devoted to determining strategic directions for the organization. As one tangible consequence, the "Adopt-A-School" program jointly operated by the Chamber and the Austin School District since 1983 has been reformulated as the "Partners in Education" program with its collaborations to be more focused on producing improved student academic achievement and workforce preparation.

² For a fuller description of the origin of Capital Area Training Foundation and its activities during its first two years of operation, see Glover, October 1996.

At the end of 1998, the Greater Austin Chamber of Commerce entered a new, expanded phase in its workforce development efforts. The Chamber hired as its own executive vice president for workforce development the executive director of the Capital Area Training Foundation, then loaned him back to the Training Foundation. In addition, the Chamber also committed to provide \$1.25 million in private funds over the next five years to finance the administration and brokering of school-to-career efforts through the Capital Area Training Foundation. This five-year time horizon offers an ideal time frame for long-term strategic planning, targeting specific outcomes to be achieved. The new structure more closely ties the two organizations and their activities together while maintaining them as separate entities. It also better integrates workforce development with economic development efforts.

Although considerable progress has been made, Austin's efforts to produce a workforce with skills better aligned to local economic requirements are still developing. This is a continuing endeavor with long-term consequences. Much remains yet to be accomplished in the arena of work-based learning systems. For example, the University of Texas has been slow to respond to the continuing learning needs of the Austin's incumbent workers. Other postsecondary institutions are stepping in to fill that vacuum, including Austin Community College, Southwest Texas State University, and St. Edward's University, as well as education/training institutions formed by corporations, such as Motorola University and Dell University.

As Austin grows into a major metropolitan area, the challenges and prospects now facing the Austin are becoming more difficult, diversified, and complex. Along with the continuing need to make improvements in the region's workforce development and learning systems, other challenges to the quality of life for Austin residents are rising. These include developing an overburdened transportation infrastructure that has not maintained pace with growth, coping with rapidly inflating housing costs (the highest of any city in Texas in 1999), promoting continued economic growth and diversification, and countering urban sprawl and the threats of environmental degradation.

Conclusions

Austin's workforce development efforts have begun to pay off. They have provided the Austin business community with the "arms and legs" to implement improvements in local systems to produce a better-prepared local workforce. In addition, they have offered industry a more unified and effective voice in speaking to schools and training providers.

Austin workforce programs have begun to attract national attention. Austin's efforts with the semiconductor industry were the focus of two special television news reports prepared by Hedrick Smith and broadcast nationally in July 1998 on the public television newscast "The News Hour with Jim Lehrer." Austin was featured in a cover story, entitled "Building Better Workers," in the national magazine published by the U.S. Chamber of Commerce (See U.S. Chamber of Commerce, June 1998). The Capital Area Training Foundation and the Austin initiatives now regularly receive mention in the growing national literature on workforce development and school-to-work systems (e.g., Olson, 1997; Committee for Economic Development, 1998).

Austin's reputation as a center for business and high technology development and creativity likewise advanced during 1998. The city received considerable favorable publicity in the national press and in business magazines. In January, the *New York Times* featured an article entitled "Austin Rides a Winner: Technology" (Verhovek, January 31,

1998, p. A-7). An October 1998 issue of *Forbes* magazine touted Austin as a growing center for entrepreneurship in the software industry (Fisher, October 19, 1998, pp. 108-110.) In November 1998, *Fortune* magazine ranked Austin as the best city for business in North America (*Fortune*, November 23, 1998, pp. 142-156). The same month, a cover story in *Newsweek* magazine listed Austin among the ten "Hot New Tech Cities" (Levy, November 9, 1998, pp. 45-56). With so much favorable attention and publicity, the Austin economy is almost certain to move into the next century at full throttle. The region's learning systems will continue to be under pressure to produce a qualified workforce to fill the area's growing needs. Learning from its past, Austin business community is now putting in place practical mechanisms to partner with educators and to achieve this aim.

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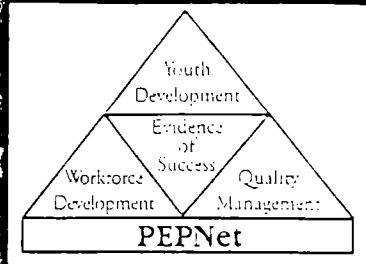
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PEPNet '98

PROMISING & EFFECTIVE PRACTICES NETWORK

Lessons Learned From 43 Effective Youth Employment Initiatives



NATIONAL YOUTH EMPLOYMENT COALITION

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PEPNet's THIRD YEAR: LESSONS AND PROSPECTS

The Promising and Effective Practices Network (PEPNet), begun three years ago by the National Youth Employment Coalition, went against the grain of then-current conventional wisdom. The reputation of youth programs was, at best, mixed. A number of reports, most notably the national study of the Job Training Partnership Act system, seemed almost unanimous in concluding that youth programs "didn't work." In an environment of lukewarm support for social programs in general, youth programming in particular seemed a risky investment at best.

PEPNet has, in three years, restored some balance to the policy maker's assessment of youth programs. It has done so by seeking out and recognizing programs that do make a difference in young people's lives, and by building a framework that program managers and practitioners can use in assessing and strengthening their efforts.

The PEPNet designers (a "PEPNet Working Group" of forty experts from throughout the youth employment field) started with a few basic precepts. Their experience convinced them that there was effective programming to be found for young people; they all had seen numerous examples of it during the course of their work. They also believed, though it took some months of intense discussion to put into plain words, that the core elements of effective programs could be defined and used as criteria to assess and select the most effective programs.

Two of these elements, named "PEPNet categories," were straightforward enough: strong and steady program management, and a well-defined focus on workforce development. But two of the categories PEPNet's framers articulated were less obvious. Good youth programs, they said, make serious and conscious efforts to incorporate "youth development" into their fabric; and good youth programs make it a point to produce evidence that they "work." They also believed that "goal congruence" of purpose and activities — a clear statement of plausible aims and a logical connection between those aims and the services and activities that made up the initiative — cut across all of the categories.

In three years, PEPNet has identified more than forty programs nationally that meet these criteria. Carefully trained professional review teams have applied the "PEPNet criteria" rigorously to screen applicant programs and select those that most strongly meet those criteria. The forty-three PEPNet Awardees, diverse in any number of programmatic details, nonetheless have in common their organizational solidity, their commitment to youth development, their workforce emphasis, and their track record of effectiveness.

Reviewing the evolution and success of PEPNet, one can find a number of varied and useful lessons. These fall, roughly, into three groupings: lessons for practitioners, lessons for program funders, and lessons for policy makers.

Lessons for Practitioners

The wide diversity of program approaches and designs reflected in the PEPNet Awardees suggests a critical lesson, yet one that needs careful elaboration: There is no single template for effective youth programs. PEPNet programs serve youth as young as fourteen and as old as twenty-five; they span summer-only, year-round, residential, and other approaches. Some make work experience a dominant feature; others stress the classroom. Yet while PEPNet Awardees combine program elements in often novel ways, the elements themselves are for the most part familiar tools and techniques known to the youth field for decades.

What distinguishes PEPNet programs, and what they share in common, is intensity of experience and relevance to the young people they serve. Youth become engaged in PEPNet programs; what they experience in these programs connects directly with their needs and lives. That is no accident. Typically it reflects thoughtful program design, regularly revisited and refined, and solid implementation that draws on professionals who understand and are interested in young people, and who work with them skillfully. The synergy of careful program design and caring implementation is a hallmark of PEPNet initiatives, as is continual reflection and refinement of their initiatives.

These attributes, it should be noted, are far more easily summarized and described than brought about in the field. PEPNet Awardees have been able to do so.

No PEPNet initiative, however effective, claims to meet all needs. Indeed, the opposite is true: effective programs do not try to do everything for everyone. Their design reflects clear priorities and goals—in the kind of youth they target, what they seek to accomplish, the kinds of service and activity elements they use, and the qualifications of staff they employ. PEPNet programs are clear about what they do (and do not do), and consistent in seeking to do it as effectively as they can.

Thus PEPNet Awardees, even those that might superficially resemble other programs, distinguish themselves by going “the extra mile.” They may use familiar elements, but they do so in ways that go well beyond “pro forma” offerings, creating instead intensive and engaging experiences for young people.

What helps make this possible is that PEPNet programs treat young people as active participants, not just as service recipients. Many of the PEPNet Awardees have formally established roles for youth—as advisers, interns, and counselors. Not told what to think, young people in PEPNet programs are asked what they think, and programs look to accommodate their preferences and opinions.

Finally, PEPNet Awardees quite frequently stress the notion of service and community. By definition, of course, PEPNet initiatives have to do with work and employment. But quite frequently, the focus on work and employment is animated and reinforced by a larger context: the role of young people in their communities and societies. That emphasis may be obvious enough in service corps and YouthBuild programs. But it is interesting that even among non-corps programs, community service is an important medium for instilling responsibility and awareness in young people, and in reinforcing the core employment-related lessons of the program. That emphasis, along with rich networks of collaboration established by the PEPNet programs, helps young people learn how to connect with broader institutions in society.

Lessons for Program Funders

Funders of youth programs—whether government, foundations, or the private sector—can think about the PEPNet experience in several useful ways. First, PEPNet makes the case that there are effective youth programs to be found and that there indeed are sound “investment choices” in the youth field, a premise that might have seemed more arguable several years ago. PEPNet has identified forty-three programs that should be supported, and will identify more.

Second, and what seems even more important, is that PEPNet demonstrates that a criteria-based approach for assessing youth programs and determining their merit and effectiveness can work in practice. This can aid funders in deciding which programs to support. The PEPNet criteria, which focus on five generic but critical elements — management stability, youth development, workforce development, evidence of success, and goal congruence of purpose and activities — are neither perfect nor complete. They nonetheless begin to define a set of threshold standards of what constitutes a sound program. Furthermore, they have proved their usefulness as a promising “self-help” tool for the many youth organizations that have used PEPNet as a self-assessment guide.

Third, the PEPNet emphasis on “evidence of effectiveness” offers a useful tool for funders. The evidence itself—whether evaluation reports, participant data, or outcome measures—can be directly useful as a rationale for funding choices. Beyond that, it reflects the commitment of high-quality programs to report candidly and dispassionately on their results and to make continuing use of program data as a management tool. It is interesting that a small but discernible number of the PEPNet programs are largely sponsored by private sector sources, which traditionally take “the bottom line” seriously. Encouraging that bottom-line emphasis may yield larger dividends over time by interesting the business community in effective youth programs.

There are some less positive, but equally important, lessons that funders may wish to consider. One is that there are still too few programs for young people that reflect the quality standards PEPNet has established. Too few programs have the organizational and management coherence, the sophistication about youth issues, or the foresight to take measurement and evaluation seriously enough. What PEPNet offers is a framework for distinguishing outstanding from ordinary programs. In so doing it also underscores the fact that the youth field has much growing up to do.

Lessons for Policy

The lessons for policy from the PEPNet experience are few but important. Funded by both national foundations and the U.S. Department of Labor, the PEPNet collaborative process has made three contributions. First, PEPNet has provided a tangible framework for identifying quality youth programs that has proved practical in the field. In so doing, it has lent some substance and rigor to what previously were often hazy ideas of what a "quality" program looked like.

Second, PEPNet has begun to move the idea of "youth development" into more widespread acceptance. The PEPNet criteria and indicators of youth development are admittedly far from definitive or complete. But much of the youth development field itself is in an evolutionary stage, and large issues regarding the definition or measurement of youth development remain open to discussion. PEPNet has not resolved those larger issues, but it has helped to both emphasize the importance of youth development and identify real-world examples of how it can be instilled in programmatic settings.

Finally, PEPNet has, in a modest way, established itself as a focused technique for strengthening the youth field. The self-assessment approach that PEPNet emphasizes has meant that organizations that did not feel themselves ready to apply for PEPNet recognition could still utilize the PEPNet criteria fruitfully as the basis for self-examination and improvement. Thus far more than 5000 copies of the PEPNet materials have been distributed nationally to youth organizations. Though many of these organizations did not apply for PEPNet recognition, a good many (with technical support provided by NYEC) used the PEPNet materials to become better programs. Although that process is less visible and dramatic, it too plays a useful part in strengthening the capacities of the youth field and in bringing us closer to coherent and viable policies for youth.

Effective Practice	Specific Strategies, Methods, Techniques, and Approaches	PEPNet Awardees
Provide Experiential Learning Opportunities	• Create project-based learning experiences designed to teach transferable skills • Construct a "Work Experience Ladder" that allows youth to progress upward • Involve youth in service learning activities that develop job skills while teaching the value of each individual's contribution to the community • Instill the value of self-discovery and learning from one's mistakes by having staff, employers, and community members serve as coaches and facilitators to youth • Create summer student-run projects that simulate actual business enterprises	JC;CYC;SW;CS²;BCT;FS;LAC;URI;YIP; CJCC TX;WAY TX;ACE;SW;CITE;WAY;YC;YB;AZC; GCT;HHJCC;LAC;NJYC SW;YC;AZC;URI SW;SW;AZC;DJCC;FS;GCT;SI;URI
Ensure that Employers are Actively Engaged	• Invite businesses to share their technical business expertise (e.g. management, training) • Engage employers in active roles on advisory and/or steering committees • Communicate regularly so that employers can mentor youth and undertake evaluations consistent with program goals and objectives • Invite employers to provide instructional staff, training facilities, and other resources • Encourage employers to serve as mentors or full partners in student-led projects	SW;CS²;MTP;MSY;MUC;YIP;MT;YBD; PJCC;PF CCOC/P;YC;FECS;JC;BCT;CLA;CVB; DJCC;GCT;HHJCC;MSY;MT;CJCC;YBD JC;WAY;CCOC/P;AZC;DJCC;LAC;MUC; STR;YIP;MT SW;YDB;PJCC;ACE;FCP;YC;WAY; CCOC/P;SW;AZC;BCT;FS;HHJCC;MSY; MSY;SI;YIP MYEEP;MT;CJCC;DVJCC;TX;PF;CITE; SW;WAY;CCOC/P;FCP;BCT;CVB;DJCC; GCT;LAC;MTP;MSY;URI
Emphasize the Connection Between Work and Learning	• Offer evening tutorial services • Integrate the teaching curriculum around a unifying career theme • Rotate youth through varied work settings to allow them to gain a better understanding of the educational requirements necessary for access to and success in those fields • Document attainment of workforce development through performance reviews	YBD;MYEEP;PF CCOC/P;CITE;FCP;YB;JC;CLA;CVB;DJCC; FS;GCT;HHJCC;MTP;MUC;YIP;CJCC;YBD; PJCC;TX FCP;FECS;CITE;SW;TX YBP;ACE;YC;WAY;AZC;CLA;CVB;FS; HHJCC;CJCC;YBD;SW
Offer Post-Placement Activities	• Staff monitor job retention and assist with job development services • Strong linkages with higher education to promote smooth transition • Program staff take it upon themselves to promote informal, personal follow-up • Alumni Associations offer support, life skills training, and job networking workshops • Programs or employers offer scholarships, tuition assistance, or financial aid advice • Graduates invited to make recommendations for program improvement or return to serve as volunteers, mentors, or join program staff	MT;YDB CW;SC;CJCC;YBD;DVJCC CJCC;CA MT;YDB CW;SC;CJCC;YBD;DVJCC CJCC;CA

* More information about these initiatives is included in the Profiles section of this document.
See the Key to the PEPNet Awardee Abbreviations on page 21.

WORKFORCE DEVELOPMENT

Effective programs clearly emphasize the development of skills, knowledge, and competencies that lead to jobs and careers. Workforce development is exemplified by the preparation of youth for the workplace, through the appropriate use of training, workplace exposure, work experience and education, a consistent emphasis on the connection between learning and work, and the active involvement of employers.

Effective Practice	Specific Strategies, Methods, Techniques, and Approaches	PEPNet Awardees*
Nurture Career Awareness and Exploration	• Offer multiple and sequential exploration experiences rather than one-shot activities • Provide opportunities to learn and prepare for colleges and Universities • Take field trips to work sites and invite guest speakers to talk about career options • Provide access to a job reference library, job listings, and labor market information • Involve youth and employers in Career or Job Clubs, Career Days, and Career Fairs • Encourage local employers to offer job shadowing opportunities • Help staff increase their career awareness through structured worksite visits	WAY;ACE;FCP;CS²;JC;BCT;CLA;MCSC;NJ/WG MYEEP;TX;CA FECS;YBR;CITE;CYC;CCOC/P;YBM;CLA; DJCC;MTP;MSY;MUC;NJ/WG;SI;STR;URI; YIP;MT;PF YBP;ACE;CCOC/P;YBR;MCSC;NJ/WG;SI;PF DVJCC;PJC;CCOC/P;CYC;FCP; YBP;CITE; FECS;BCT;CLA;MTP;URI;YIP FCP;FECS;CITE;YBR;DJCC;FS;MSY;MT;TX CS²;FECS;DJCC;FS;MSY;YBD
Embed Career Guidance and Career Planning Throughout Program	• Guide youth through self-assessment of personal interests and goals • Offer proactive counseling sessions dedicated to career planning • Offer workshops and courses that cover career topics such as resume writing, interview skills, job hunting, and job keeping skills • Help youth maintain a "career planning portfolio" or other career plan • Emphasize job retention and career advancement over entry-level placement • Coordinate and integrate multiple services within a "Career Services Center" • Use counselors and mentors to nurture and support youth through work experiences	ACE;YC;JC;YBP;CVB;DJCC;MSY;MUC; NJ/WG;STR;SW;YBD CCOC/P;CITE;WAY;YBP;CVB;FS; HHJCC;LAC YBP;FECS;ACE;WAY;CITE; CCOC/P;PF;DVJCC;SI CS²;FECS;CLA;DJCC;MSY;MCSC;MUC;STR; MYEEP;SW WAY;ACE;LAC;MSY;MCSC;MUC;NJYC; SI;PF CCOC/P;JC;CLA;CVB;DJCC;GCT;HHJCC FECS;WAY;YBM;DJCC;HHJCC;MTP;SW;TX
Provide Work-Based Learning Opportunities	• Fully utilize opportunities to use non-paid work experiences to teach basic work skills • Structure service learning and community service experiences to teach transferable skills • Employ a range of paid, part-time, subsidized, and summer work experiences • Create multiple and flexible internship experiences of varying lengths • Team with trade unions to offer apprenticeship or pre-apprenticeship opportunities • Create opportunities for youth to work alongside tradesmen and professionals	FECS;WAY;YBM;SW;TX YBD;DVJCC;PJCC TX;GCT MYEEP;TX YBD YBD;PJCC;TX;MTP;MC;SC

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14

Divider Title: _____

NATIONAL  ALLIANCE
OF BUSINESS

Work•America

THE BUSINESS VOICE ON WORKFORCE DEVELOPMENT

Business, Educators Find Power In Baldrige to Improve Schools

The business community this spring is mounting a campaign to offer education the same resource that companies use to improve their operations, results and competitiveness: the Malcolm Baldrige National Quality Award.

The National Alliance of Business and the American Business Conference (ABC) are leading this campaign, along with the chief executives of companies that have won the Baldrige award or participated in the process. Norman Rickard, president, Xerox Document Services Group, and CEOs Michael Bonsignore of Honeywell and Roger Ackerman of Corning are among the business leaders urging Congress to extend the Baldrige award to education.

The Business Coalition for Education Reform, a national network of more than 350 business-

continued on page 4

See Inside

Making "Unheard of" Changes, Florida District Reaps Quality Results

3

States, Districts Use Baldrige to Improve Schools

7



Using the Malcolm Baldrige National Quality Award criteria, businesses and educators can work together to get results in student achievement.

Making 'Unheard of' Changes, Florida District Reaps Quality Results

Blazing along the quality path since 1993, schools in Pinellas County, Fla., have sparked major changes in classroom, union and school board practices. Together, these changes in business as usual are raising student achievement — the ultimate goal of the quality process — by as much as 30 percentile points on standardized tests in a year's time.

With strong local business partners such as AT&T Paradyne (now Lucent Technologies) and Honeywell, the Pinellas County School District has been using the Malcolm Baldrige National Quality Award process as a framework to improve schools.

The process has helped the district turn "random innovations" into a coherent, systemic approach to school improvement, according to Linda Bacon, president of the Pinellas Classroom Teachers Association.

Quality Academy, or 'Boot Camp,' Provides Intensive Training

With help from their business partners, educators at every school in the 115,000-student district have learned about developing a mission, benchmarking, setting goals, evaluating progress, satisfying customers and continuing to improve.

The district operates the Pinellas County Schools Quality Academy, known by insiders as "boot camp," which provides intensive training about the Baldrige quality process. By training educators from 150 other school districts around the country, the academy has become self-sufficient, according to Jim Shipley, executive director of the quality academy and a national Baldrige examiner.

Classroom Improvements Reach Teachers, Students

More than 70 percent of the schools in Pinellas County are using the Baldrige process at the classroom level as well — to the point where teachers and students define their mission, identify individual goals in reading and other subjects, benchmark their progress using performance data, and draw flow charts to analyze problems and identify solutions, according to Jane Gallucci, a school board member.

The process has helped the district turn "random innovations" into a coherent, systemic approach to school improvement.

"Kids can tell you how they are progressing on their individual goals and how much they need to improve," says Gallucci.

Children at one elementary school are so well versed in quality principles that they taught leadership skills to senior managers at a local company, who were so impressed that they rejuvenated their own lapsed quality initiative.

Pinellas County first piloted the use of quality tools in the classroom in a handful of schools, making sweeping changes that resonated throughout the district.

The district collaborated with its two bargaining units, the Pinellas Classroom Teachers Association and the Pinellas Education Support Personnel Association, to ease contractual rules in the pilot schools. The principal of a new middle school, for example, was given the latitude to hire his own staff, an authority normally unheard of, says Gallucci. Teachers in all the pilot schools made a commitment to attend quality training one night a week throughout the school year.

A Supportive Union Practices Quality Principles

Quality training led by AT&T Paradyne galvanized Pinellas educators to think creatively about improving school processes at many levels. "The district saw it at first as a way to help improve business services," says Bacon. "They quickly saw that it could help improve schools across the district. Schools made the connection to classroom practices. We saw that the union could benefit from it in our processes as an organization."

The union adopted the quality process as a way to support teachers' professional development. This year, the Pinellas teachers' association became the first union in the state to apply for the Sterling Award, Florida's version of the national Baldrige award. •

FOR MORE INFORMATION
To learn more about the Pinellas County Schools Quality Academy, call Jim Shipley, executive director, at 813/588-6295 or e-mail him at shipleyj@pinellas.k12.fl.us

challenged to meet more demanding performance standards and higher customer expectations and to deliver quality services, all at lower costs. And they are increasingly being held accountable for their performance."

Indeed, virtually every state is enacting academic standards and assessments to improve student performance — and many are implementing sanctions for schools that fall short of their performance goals.

"Therefore, education and healthcare leaders are searching for improvement strategies that work," says Rogstad. "American businesses have proven that Baldrige does work."

An Effective Strategy for Change

The Malcolm Baldrige National Quality Award, established in 1987 and managed by the National Institute for Standards and Technology (NIST), was named for the late U.S. Secretary of Commerce who championed quality management as a key to U.S. prosperity and long-term economic strength.

At the time, many U.S. companies were reeling from eye-opening bouts with strong Asian and European competitors in the global economy. Competitive pressures and comparisons forced American businesses to look at quality as a necessity, not an option.

Today, the award is a standard of excellence that helps companies achieve world-class quality. The criteria for the Baldrige award give companies a framework for enhancing their competitiveness by focusing on two goals: delivering ever-improving value to customers and improving overall company performance.

Indeed, investing in quality pays off for companies in terms of increased productivity, satisfied employees and customers, and improved profitability both for customers and investors.

"It is our firm belief that the Baldrige criteria is the best management system for running a lean enterprise," says Honeywell's Bonsignore.

Parallels in Education

U.S. schools today are at the same crossroads that U.S. businesses faced half a generation ago. Business leaders and educators alike recognize the parallels.

Increasing international competition. U.S. high school students do not perform well compared with their peers in other nations on tests such as the Third International Mathematics and Science Study (TIMSS).

Increasing pressure to improve performance. High academic achievement is essential to the personal and economic viability of individuals as well as to the stability of our democracy.

Increasing accountability measures. School "customers," including students, parents, taxpayers, businesses and post-secondary educational institutions, expect schools to use their resources wisely to produce quality "outcomes": well-educated students.

Plainly, given these parallels, the Baldrige criteria and built-in feedback process appeal to educators bent on improving student results. Since NIST adapted the criteria for educators in 1995, more than 15,000 education organizations have requested them — a strong testament to the widespread interest among educators.

Results for Schools

The most compelling argument for using quality principles in schools is that they yield results. In schools where quality initiatives have been in place for some time, data from the Baldrige process is driving dramatic

Three Reasons Why Baldrige Works

1. A Baldrige assessment, unlike many other school improvement strategies, is nonprescriptive. It's not imposed from on high or done "to" somebody. It engages people from within the system and outside partners alike, making it a win-win process for everyone.

2. The Baldrige process empowers people — parents, teachers, administrators, school board members, business people and students themselves — to influence, control and act positively. It creates ownership. It enables people to work as partners to set common goals.

3. The Baldrige process yields bottom-line results in terms of student achievement and behavior. Students come to understand and value their opportunity to learn.

improvements in curriculum, instruction and achievement.

"Teachers have to have data to say, 'I'm doing a good job,'" explains Jane Gallucci, a school board member in Pinellas County, Fla., where schools have been using the Baldrige criteria for several years. (See story, page 3). "Some teachers thought they were doing a good job, but when they saw the data, they said, 'Gosh, I need to change some of the things that I'm doing.'"

With Baldrige as a framework, schools now have a systematic way of examining — and improving — their practices to produce better student results. •

States, Districts Use Baldrige to Improve Schools

In 42 states and hundreds of school districts across the country, quality practices based on the Malcolm Baldrige National Quality Award increasingly are viewed as a powerful framework for school improvement. Here's a look at the action in a few states.

A Business-Led Initiative

In North Carolina, 26 school districts are applying Baldrige quality tools to make leadership and classroom improvements. The 500 employees of the state's department of instruction also have received quality training, making them better able to provide services to local districts.

The state's tight-knit business community is supporting the initiative, which by next year will reach 70 percent of the state's K-12 students. Companies such as BellSouth, BroadNet Inc., Carolina Freight, Carolina Power & Light, Duke Power, DuPont, Glaxo Wellcome, IBM, Lenox China, Nortel, Roche Biomedical, Wachovia and Weyerhaeuser have actively supported quality training for hundreds of educators.

"The top leadership has been phenomenal," notes Tom Houlihan, president and CEO of the North Carolina Partnership for Excellence.

He says that as a result, "An awful lot of change is taking place in classrooms." For example, students in a classroom in Lincoln County take literally the notion that there are many ways to solve problems. By working in teams, they discovered 18 ways to learn the multiplication tables.

"Even those of us with high expectations clearly underestimate what teachers and students can do given the right tools, training and technology," says Houlihan, a former education advisor to North Carolina

Gov. Jim Hunt and former local school superintendent.

Student performance seems to bear out that notion. North Carolina eighth-graders registered a 17-point gain over the past six years on the National Assessment of Educational Progress math test, twice the national average and about 50 percent higher than the gain by any other state in the nation. Fourth-graders registered an 11-point gain, three times the national average.

The Alliance is preparing a case study of the North Carolina initiative for release this fall.

Focusing on Results

In Minnesota, the Minnesota Academy Excellence Foundation (MAEF) is training educators in quality practices to help students.

Business partners including Cray, Honeywell, Jostens, IBM, National Computer Systems, ReliaStar, Unisys, US West and 3M are working with local schools to make improvements.

"Education traditionally has focused on activities and not results,"

says Zona Sharp-Burk, executive director of MAEF. "When they learn about the culture of output and productivity, teachers begin to understand why they are actually educating students."

This understanding leads to dramatic improvements in student achievement. For example, students in a fifth-grade classroom at Plainview Elementary School in Plainview, Minn., increased their scores by 24 percentile points in subtraction and by 26 percentile points in division. (For more on Minnesota results, see page 6.)

A New Unionism

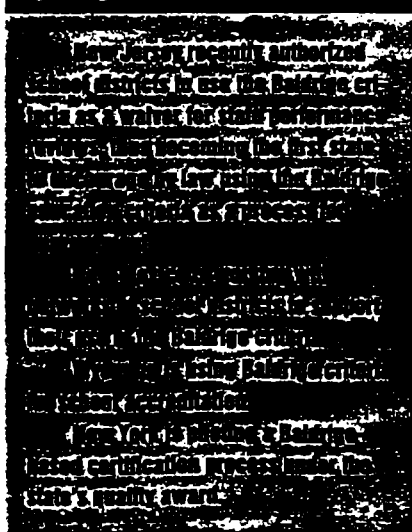
The nation's largest teachers' union, the National Education Association, also is introducing its members to Baldrige criteria as part of its National Center for Innovation Learning Laboratories Initiative.

A network of 30 school districts in 30 states is participating in the initiative, which brings together school superintendents, school board members and teachers union leaders for training in quality strategies for improvement.

"Job satisfaction for teachers today goes beyond working conditions and salaries," says Linda Bacon, president of the Pinellas Classroom Teachers Association in Pinellas County, Fla. "Job satisfaction is when they look into the face of the child and the child says, 'I get it.'"

Moreover, the Baldrige framework's emphasis on data collection and analysis makes collective bargaining more productive. "Disputes in bargaining are disputes in data," says Bacon. "If we've all got the data, it should be evident what we should do. That's a major move forward to us."

Quality Criteria in Other States



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15

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Governor Underwood presents Lifelong Learning Awards

 Governor Cecil Underwood announced winners of the Governor's Lifelong Learning Awards for West Virginia businesses on Thursday, November 12, 1998, at the Charleston House Holiday Inn in downtown Charleston. Five companies were honored at the luncheon.

Century Aluminum's company education program was named Outstanding Employee Program, which recognizes the single most innovative program of lifelong learning for a company's employees. Working together, Century Aluminum and the United States Steelworkers Local 5668 developed a structured training process that allows them to capture best practices in job processes and transfer that knowledge into a training program that focuses on lifelong learning rather than short-term training. Al Toothman, manager of Administrative Services, accepted the award.

Barbara Staresinic accepted the award on behalf of Coldwater Creek, whose company education program received an honorable mention for Outstanding Employee Program. Formed in cooperation with West Virginia University-Parkersburg and West Virginia Development Office, their recently implemented distance learning project will bring advanced video-conferencing technology to their new

Shawnee Community Education Center and the Institute Plant companies Rhone-Poulenc, Lyondell, and Union Carbide. The employees of the Institute Plant include many skilled scientists, engineers, and technicians. The Community Improvement Council began planning a way to use that expertise to improve the math and science of local children, and to spark their interest in the sciences. The result was this innovative program, Celebrating Science.

Columbia Natural Resources (CNR) received an honorable mention for Outstanding Community Based Lifelong Learning. In the summer of 1998, CNR provided 25 computers and \$5000 in funding to local adult literacy programs throughout West Virginia. The donation was made to Literacy Volunteers of America—West Virginia and West Virginia Laubach Literacy. CNR sees this project as a way to promote the development of foundation-level skills for adult learners. Their donation of \$5000 enabled both literacy programs to offset miscellaneous expenses associated with the installation of the computers and to purchase new instructional software. Lawrence Malone, director of government relations, accepted the award.

Dr. Dwight Sherman accepted Union Carbide Corporation's (UCC) Lifelong Award of Excellence for the company education program having the best overall program of lifelong learning for its employees and community. Union Carbide operates a continuing education center for UCC employees in the Kanawha Valley, which offers a variety of courses ranging from personal improvement skills to more technical classes. In addition, the center offers monthly technical presentations, a year long program for new process engineers, and courses that teach job-specific skills. Informal technical seminars, lunchtime panels, and personal development programs are offered frequently. Managers also provide employees with information about courses available outside Union Carbide that are related to their current jobs or for jobs they hope to obtain.

These lifelong learning awards are sponsored by Governor Underwood, the Governor's Council on Literacy, the Cabinet Council on Education, and the West Virginia Chamber of Commerce. ■

Education is not a product . . . it is a process, a never-ending one.

— Bel Kaufman

Parkersburg location. Using this new technology, the project will allow Coldwater Creek to link their managers, supervisors, and training specialists in Idaho with their new West Virginia employees. So far, nearly 250 West Virginia employees have been involved in company-sponsored training using the new system.

Hal Foss, plant manager, accepted for Rhone-Poulenc Institute's Celebrating Science project, which was recognized as the Outstanding Community-Based Lifelong Learning program. Celebrating Science is a partnership between

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For: EMPLOYER
JOBSEEKER
STUDENT

AMERICA'S CAREER KIT

A FREE Set of Internet Personnel Resources



America's Job Bank (www.ajb.dni.us) offers two critical components to address staffing needs:

America's Job Bank (AJB), the largest and most frequently visited electronic job bank, is the site where thousands of job seekers each day view hundreds of thousands of job vacancies. The jobs include the entire sweep of the economy (cooks to computer programmers) and come from major corporations as well as small businesses nationwide.

The service is simple to use. **To register**, first-time employers should: sign onto the AJB website; click on employers; select "New Users Register Here"; indicate your home state; and complete all of the requested registration information. Within approximately three business days, you will be notified of your approval by e-mail or phone. **You are now ready to post a job, search resumes (see below), and begin to reach thousands of potential job seekers each day.** Just enter the AJB website, click on employers, select "Registered Users Log in Here," return to your home state, and enter your user name and password.

America's Talent Bank allows employers to search a nationwide database of electronic resumes to find suitable candidates for their job openings. Employers can learn about job seekers' education, experience, and skills and abilities in an easy-to-follow, structured format. All employers registered for America's Job Bank (see above) will be automatically invited to review the tens of thousands of resumes available through America's Talent Bank.

America's Career InfoNet (www.acinet.org) provides valuable resources for the employer and job seeker alike including: employment trends; prevailing wages; economic information; demographic information, etc. Recent enhancements to this service include state and local-level data and on-demand information available directly from America's Job Bank and America's Talent Bank.

America's Learning Exchange (www.alx.org), currently under development, will make it easier for employers and individuals to find the training they need. Employers will be able to search for training packages and providers or leave training specifications in a special marketplace where training vendors can bid to fulfill employer needs. Employers also may list any courses they have developed and are willing to license and sell. The goal of America's Learning Exchange is to lower the overall costs of training, thus increasing the opportunity for employers and individuals to invest in the training necessary to raise the skill level of the American workforce. Check out the Learning Exchange's demonstration website to see how this exciting new effort is progressing.

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Brave New U

Online Learning and Other New Technologies Are Changing What College Means for Both Student and Teacher

By WENDY SWALLOW WILLIAMS

THE PROBLEM: DESIGN A BUILDING for higher education in the 21st century. The solution: a facility laced with the latest computer technology where faculty work in modular cubicles rather than behind closed doors so they can be more accessible to students, where classrooms are modeled after meeting rooms and can be easily reconfigured with movable walls, and where students can retreat to a central area with a soothing fountain and Japanese-style seating to talk and think.

It sounds like something out of the future, but for the five George Mason University undergraduates who designed this building model as part of a course in the school's New Century College, the future is here. John Aarnio, Zack Appleton, Collin Barth, Robin Alexander, and Michelle Linderer created their building in a course called Vision Quest: Modeling the Natural World Using Art, Computer Programs, and Science.

They started with a topographical map of the campus and finished with multimedia presentations that included animated 3-D computer modeling, artists' renditions, overhead projections, and a landscaped model. The course was team-taught by a physicist and an artist with help from a university architect.

New Century College—a school within a school where 800 students take classes from teams of teachers who cross academic disciplines and focus on real-world applications, such as conflict resolution and new media—is part of George Mason's ef-

Wendy Swallow Williams teaches journalism at American University.



fort to hold on to bright students and to do a better job of educating them for the new millennium.

Before George Mason launched the project, it consulted with local business leaders about the skills and experience considered essential to employment today. The program emphasizes group learning, personal attention from faculty, and problem-centered projects, says New Century College dean John O'Connor.

All 80 students finishing this year have designed their own majors, and graduates leave with a portfolio of professional-quality work and extensive experience in computers and group dynamics.

This isn't college as most of us remember it—cold classrooms with little more than a chalkboard and desks, stacks of musty books in ivy-covered libraries, and faculty locked away in private offices. New

Century College is housed in a technology-dense building that combines an open-stack library with a food court, a theater, classrooms, conversation pits with sofas and low tables—and 800 computer jacks.

Says O'Connor: "The building encourages group work in the same way the traditional library encourages solitary learning."

UNDER THE PRESSURES OF A COMPETITIVE job market and the wide-ranging changes that information technology is bringing to teaching and learning, a different educational landscape is emerging.

George Mason's New Century College isn't the only area alternative to traditional academic programs. Innovative approaches are cropping up at many local colleges and universities, from online faculty office hours to classes paired up with universities around the globe for team projects pro-

duced on the World Wide Web.

Universities are experimenting with on-line testing, course Web sites linked to resource pages, and digital "slide" presentations using PowerPoint software. Everything from English lit to molecular biology seems to be fair game for innovation.

It isn't a cadre of technology-happy faculty driving these changes. Students and businesses are demanding that schools adapt to new methods, offer more relevant curricula, and train people for jobs as well as for thinking. These demands are spawning surprising alternatives.

At Keller Graduate School of Management, an management program that set up shop in Tysons Corner, classes are held at night and on Saturdays in a high-rise office building. The registrar is a receptionist, the library is online, and the bookstore is a storage room. The professors are almost all local professionals who tumble out of the nearby businesses for a chance to share their expertise and earn extra money. During breaks, students gather in a lounge around a couple of vending machines and talk about their jobs.

For a growing number of people, this is what graduate school looks like. The US Department of Education says nearly half of those studying for graduate degrees today are part-time students over 25, and that percentage is expected to increase. It's not just the site and the student body that make Keller different. The Chicago-based school, which has no traditional campus, is an arm of DeVry Inc., a for-profit company banking on what Wall Street sees as potential growth in the graduate-education business over the next decades.

With flexible programs, an emphasis on service, and a price about half that of bigger-name business schools, Keller is doing so well that this past February it opened a second area site in Crystal City. The nation's capital is only one of Keller's recent conquests. The school has 31 sites in 9 states, with plans for a host of others, and is beginning to offer courses online.

While some academics dismiss schools like Keller as a new version of correspondence schools, students say the program is rigorous and challenging. Former Navy pilot Paul Nesbit, now a market researcher for the information-technology firm TRW, signed on with Keller for his MBA hoping the degree would prepare him for more general management work. He had an undergraduate degree from the Naval Academy and received a master's in national-security affairs at Georgetown. What he needed now was a solid MBA program to help with his transition out of the military. Because he is a single parent, flexibility was key. No other MBA program around town, he says,

matched Keller's understanding of the adult student—or its price tag.

TECHNOLOGY HAS NOT ONLY CHANGED how courses are delivered; it has also opened up the competitive field.

In the old days, a student wanting to learn about government might be attracted to a school in Washington because of its proximity to Capitol Hill. Today, a school could easily set up a satellite office in DC, staffed by a secretary and a program director, and conduct classes from the home campus via the Internet while students intern on the Hill.

"This technology treadmill is moving at speeds outside anything academia is used to. In some respects, we need to blow up our buildings and systems and build new ones in their place."

The digital revolution is eliminating the boundaries of geography that have defined market niches in education. With the rapid growth of Web-based and distance education, schools are forced into competition with one another—from Oxford University in England, which has started offering online graduate degrees to tap the lucrative Asian market, to the for-profit University of Phoenix, which has an online campus and also sets up operations in business offices, using local professionals as "practitioner faculty." In two decades, Phoenix has grown to 60,000 students nationwide and is beginning to make traditional educators nervous.

As a result, competition for desirable students—those who are bright and can pay—is accelerating, and many traditional schools are trying to find new types of students. Student demand for more professionally oriented curricula is blurring the line between education and training, throwing the liberal arts into a defensive position on many campuses.

"WHEN I WENT TO SCHOOL IN THE early '60s, my professors could look at their own careers and experience and pretty well predict what my career would look like," says Wendell Cochran, a journalism professor at American University. "But that's not true anymore. Essentially, the shelf life of an education is re-

duced, especially in fields like mine, where the technology is changing things rapidly. I can't really envision what journalism will look like in 20 years, so how do I teach students who will work in the field for the next several decades?"

Cochran says AU still teaches journalism in the traditional categories—broadcast and print—but the faculty are beginning to think they should instead be teaching in terms of skills: visual literacy, critical analysis, layout and design, writing in linear and nonlinear formats, audio, computer research, data analysis, and photography. In this way, students would have a toolbox with which to adapt if their jobs change out from under them.

Journalism is not alone in this respect. From the sciences to economics, business, engineering, and even some of the traditional humanities, professors are scrambling to learn new analytical tools, to tap the array of resources on the Web, and to understand the changes technology is bringing to their disciplines.

"Teachers are finding that there is a constant need to update equipment and relearn techniques before they can even address the substance of a course," says Cochran, who teaches computer-assisted journalism and media ethics at AU. "The problem is that this technology treadmill is moving at speeds well outside anything academia is used to. In some respects, we need to blow up our buildings and systems and build new ones in their place."

For Cochran, who came to AU with extensive experience in reporting and data management from his years as a computer guru for Gannett News Service, this technology treadmill has meant developing Web-based reporting scenarios, recasting his lectures in PowerPoint software, and learning to build Web sites where journalists and students can retrieve and analyze data. This semester he's taking a class to learn how to use software tools to analyze and present geographic data.

A FEW YEARS AGO, IN AN EFFORT TO MEET the needs of students looking for a blend of disciplines, analytical skills, and technical knowledge required for modern careers, Georgetown University launched a new graduate program in Communication, Culture, and Technology. According to CCT director Martin Irvine, the program was designed for students who will be working in a world marked by "convergence, complexity, and globalization."

Outside Irvine's office one day, a group of CCT students was huddled around computers that had been clustered together as a discussion area in the program's main office. They were engrossed in a debate

about how the Internet has given new life to the phenomenon of "urban legends," stories like the one about the cat in the microwave that get passed around and are almost never true.

One student suggested a research project that would track the path of a manufactured urban legend as it took off around the Web, watching it jump continents and seeing how quickly it might filter into print and television.

"We were trying to create a program that maps onto the realities of the digital age, particularly in terms of developments in business, education, and government," says Irvine. "If Congress passes a new telecommunications bill, we need to be able to teach to the issues raised by that political act."

UNIVERSITIES ARE ALSO EXPERIMENTING with technology to find ways to make their programs academically stronger and more efficient. At George Mason, a team of computer-science professors has created an online testing system called the Hyper-learning Meter, a Web-based program that allows instructors to present factual material through tutorials and assigned readings and that tests students through a self-assessment and certification system at the end of the course. Their lab is a room filled with computers that have something like a subway map on their screens—a guide to the tutorials embedded in the program.

Peter Denning and Daniel Menasce, who built the system, talk about how the program can free faculty from having to teach basic facts in courses like math, statistics, and biology, leaving the class time to struggle with the more difficult questions. At any point in the semester, the teacher can check the online grade book and see how many of the students have passed a specific test or section of the material.

Denning and Menasce are hoping to patent the system and sell it to other teachers looking for easy computer tools to incorporate into their curricula. Denning says George Mason is interested in using the program to teach functional prerequisites for other courses, and both professors have used it successfully in their computer-science classes.

The system has limits, they acknowledge, offering reassurances that it will not replace faculty in the classroom. "There is this aphorism that we are moving from the age of the sage on the stage to one where teachers will be a guide at your side, but I challenge that," says Denning. "Teachers are more than guides—they are representatives of the profession and experts in the field that can give students better access to the profession. The thought that, with a

program like ours, you could teach these classes with just a graduate assistant there to guide students through the difficult parts is not true."

Denning and Menasce say it is unlikely that most faculty will adopt technical tools until they are simple enough not to get in the way of teaching. Those who have pioneered innovative approaches tell horror stories of failing servers, systems that lock up, and applications that can't take the demands of the classroom.

Christopher Simpson, a professor of media studies at AU and one of the university's "early adopters" of new technol-

Frank Connolly taught a computer-science course last year that was conducted entirely online. He found the lack of visual cues from the group both disconcerting to him and isolating for the students.

ogy, says the struggle to bring technology into the curriculum is more like a learning wall than a learning curve. His favorite method, he says, is to present a problem to students and let them go at it, experimenting with whatever they can think of to get the technology to work. He reports that eventually someone gets over the wall, at which point they all can go up the same rope. For this to happen, however, Simpson has to admit the limits of his own knowledge—something some professors are reluctant to do.

TO HELP TEACHERS AT GEORGE WASHINGTON University adopt new technology, faculty from the School of Engineering and Applied Science are often paired with faculty from other disciplines to develop courses.

Rachelle Heller, a professor of engineering and applied science at GW, teamed up with another engineering professor last year and taught a course in electronic commerce, where, says Heller, the discipline and the medium went hand in hand. The students met with the teachers face to face each week but had to create an entire electronic market—with a bank, credit cards, vendors, and advertising—on the Internet.

"There is nothing inherent in the technology that makes it a better teaching tool to address my discipline, but it has certain fea-

tures that can be a great vehicle for getting my discipline delivered," she says. "In order for the students to create a bank, they had to learn a lot about banking, they needed to know something about the technology to put it on the Net, and they needed to know a lot about security, encryption, coding schemes. But it's not that it has so much to do with the technology as much as what those bits are talking about. It has to do with how you bring content to your students."

This semester, Heller is teaching a course called A Walk on the Moon, open to science and engineering students at GW as well as to science students at Gallaudet University.

"The purpose is for the students at the two universities to come together on the Internet for a real project," says Heller. Students will use Moonlink, a US government-supported Web site containing moon data, to write proposals for investigations that would explore some aspect of lunar science. The project is part of a grant from the National Science Foundation to encourage women in science and engineering.

Education students at Rand Afrikaans University in Johannesburg are participating in another course, called Design and Implementation of Educational Software. According to Heller, the South African students will work with their GW counterparts mostly online. "We're not teaching online, though we are hoping to have some video conferencing. They are eight hours out of phase with us, and their class only meets four times a semester, so you can see the problems. It could be a total flop," Heller admits.

DISTANCE LEARNING, WHICH MANY PEOPLE say is going to transform education, turns out to be a mixed bag for professors who have tried it.

Frank Connolly, a computer-science professor at AU, taught a course last year that was conducted entirely online, from registration through the final exam—but because of problems with video-conferencing software, the class was forced to do all of its business through written text, mostly as online discussion and e-mail. Connolly found that the lack of visual cues from the group was both disconcerting to him and isolating for the students.

"I really missed the feedback, and the students felt the same way," he says. "Especially when we had technological problems, they would all be frustrated, but they were having those feelings alone in their own homes. A lot of the cues in a good class come through body language, and the class lost that."

Connolly says that having to conduct the class through writing also took more effort

than he had anticipated. "Once I started writing my lectures, I took more time to vet sources, check references, because I was actually publishing when I put them in digital form." Connolly notes that students also found the written format intimidating and took longer to respond to questions, in part because they felt they had to write mini-papers on all the discussion questions.

"In class they wouldn't have gone to so much trouble. They spent a lot more time [online] thinking about things before responding, but we probably didn't cover as many topics as we could have in a normal course."

Other teachers report that students are often more willing to comment when given the time to reflect and when they don't have to compete with other students for a chance to speak. Rachelle Heller of GW believes that Internet-based discussions can empower female students to contribute because the class dynamic is more balanced.

MANY PROFESSORS HAVE NOTICED THAT computers can force other changes in classroom dynamics. Simpson offered a course last semester on the use of satellite imagery to promote human-rights teaching. A handful of the students were on campus; 200 people from 24 countries audited the class via audio and video on their computers, accessing the course Web site, and participating in discussions through an e-mail listserve. As far as Simpson can tell, it was the only course on the topic in the world, and it attracted interest among security officials, some from states with repressive policies.

"There are ways to use the Web to create learning communities, but there is also the potential for serious abuse of the academic process," says Simpson. "If the classroom is to be something other than an indoctrination center, students have to feel they can speak freely, say stupid things, and learn from their mistakes. But if you are holding the discussion across the Web, open for anyone to see, it doesn't take a wild imagination to see that these conversations could be monitored and that information used against people."

Simpson says he has already seen this concern stifle discussion in his course, and he worries about the implications: "Not only are these conversations monitored; they potentially never go away. There's no way for any person to know if some offhand comment, made at the age of 20 in a college course, will come back to haunt them."

DESPITE THE PROBLEMS AND COSTS OF adapting courses, some schools are moving forward with ambitious online

programs, including the University of Maryland, whose University College has an entire undergraduate catalog of online classes. Even in the traditional humanities, computers are shaking things up.

Maryland now offers two courses for music majors that allow them to use computers to write compositions with the ease of word processing. The system includes a Macintosh computer linked to a Korg synthesizer routed through a Musical Instrument Digital Interface, or MIDI. Students can write and record compositions for

"College isn't just about being able to run the machinery. If young people don't have a chance to think and dream, then I don't want them voting on my Social Security."

everything from a small ensemble to a full orchestra. If they don't like how it sounds, they can change it instantly, note by note.

"Knowledge of this technology is a real asset to many musicians in today's music industry," says Robert Gibson, director of the university's School of Music MIDI Lab. "To have this experience upon graduating can open doors."

In Maryland's Government and Politics Department, chair Jonathan Wilkenfeld has created a project called International Communication and Negotiation Simulations, or ICONS, which lets students act as foreign-policy negotiators over the Internet, covering such diverse issues as nuclear proliferation, human rights, and drug trafficking. Every year, students from more than 40 colleges in the United States and other countries participate.

BECAUSE MORE AND MORE COLLEGE STUDENTS come from high schools where technological teaching tools such as online class discussions are taken for granted, they arrive on campus with ever higher expectations. Most faculty, however, are still trying to figure out how to get their syllabuses on a Web page and to respond to student e-mail, let alone use information technology to its full advantage.

"A lot of the resistance from faculty is generational and cultural," says Georgetown's Irvine. "You have to create an internal culture that values these things, and

you need to lead by example. It's hard to do it in a concerted, unified way because universities are not unified—and many faculty are more loyal to their field, the leadership in their discipline, than to their school."

To get the faculty to work together on long-range planning, Georgetown recently launched a new forum called the Georgetown Project on the Future, in hopes of clarifying the school's mission, particularly in terms of nurturing and expanding the liberal-arts college at its core.

"My worst nightmare is that Georgetown will not develop any coherent vision and strategy for how to be a university in the 21st century and instead will become a 'boutique' experience," says Irvine, a member of the project. "That students will come here for nostalgic reasons, wanting to replicate a certain experience they somehow imagine college should be."

Irvine hopes that Georgetown can become, instead, a school that preserves the traditional residential experience but makes it better wired and better connected to the world. He also believes the school can best support the liberal arts by taking advantage of new niches, such as offering continuing education to alumni or developing programs in partnership with area businesses.

MANY SCHOOLS ARE TRYING TO DEVELOP more lucrative graduate and continuing-education programs to subsidize the undergraduate core. One way to do that, say experts, is to fragment graduate education, breaking up traditional master's programs into smaller modules that could be accomplished quickly or combined to meet specific professional demands.

At Johns Hopkins University in Baltimore, a student in the Science Writing Program takes a smattering of courses in the traditional master's program in writing as well as electives in the School of Public Health and the science departments. To earn a Business of Medicine Graduate Certificate, students take courses in the medical school and the business school.

Johns Hopkins, which has branched out into Washington with campuses in Rockville and downtown DC, offers a variety of such innovative graduate and continuing-studies programs. Called "responsive programming," it is considered one of the most lucrative areas for schools trying to expand. The number of certificate and corporate-directed programs is growing, particularly as schools seek new graduate markets. GW also has a range of professional master's programs, such as tourism administration and acquisition management, which focuses on the work of corpo-

rate and government executives in managing property, services, research, development, and construction.

In light of this competitive market, it's not surprising, educational experts say, that programs such as George Mason's New Century College combine intensive technology, personal attention, and cross-disciplinary courses—all factors that could, ironically, be instrumental in saving the traditional liberal-arts curriculum.

Despite the demand from students for more professional training, business leaders are quick to say they need people with a broad-based education and skills in writing, communication, and critical thinking. The question isn't whether to teach Shakespeare anymore but how to make him relevant—how to relate *Richard III*, say, to a degree in political science.

"The core issue is, what promise do you make to students?" says Patricia Aufderheide, a professor of media studies at AU. "Schools that fail to make a strong case to their students and faculty that they are unique social institutions of free thought are extraordinarily vulnerable to the University of Phoenix phenomenon. It isn't just about being able to run the machinery. You want a place where young people can aspire to be thoughtful citizens. If they don't have a chance to think and dream in

college, then I don't want them voting on my Social Security."

BECAUSE A RESIDENTIAL UNDERGRADUATE education is expensive and becoming more so, most schools are looking for new ways to sell the value of that experience. Following a national trend, several in the area are reviving the centuries-old concept of bringing faculty back to live on campus so that the college experience can be infused with mentoring and other personal attention.

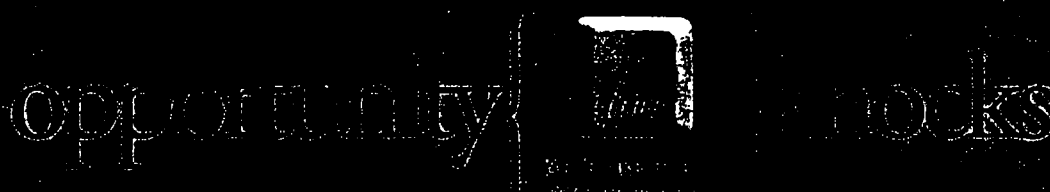
Howard University, hoping to improve the quality of on-campus residential life, recently undertook a partnership with the financial company Fannie Mae to provide money for faculty and staff to purchase abandoned rowhouses in the historic LeDroit Park neighborhood, on the southern end of campus. The school bought the land years ago to expand Howard University Hospital but recently decided instead to keep the neighborhood intact. The first few faculty and staff families moved in this past winter. A similar idea was endorsed as part of a new strategic plan approved at AU several years ago, although no one has yet asked teachers to move into the dorms.

"If schools are just seen as a ramp for performance on the job, then we're in seri-

ous danger of becoming an overcredentialed but undereducated society," says Leonard Steinhorn, a professor of communication at AU. "When degrees are easy to get, it's like grade inflation—it cheapens the quality of the work by the best." Steinhorn says that if graduate education and the liberal arts are going to be worth what they will cost in the future, they need to teach both critical thinking and a broader knowledge of how professional skills fit into society as a whole.

"We have to make the case again for the liberal arts," he continues. "Students can read six books, but they need someone to weave them together and put them in context. Students have a real hunger for that advice and guidance." To professors like Steinhorn, adopting a business model, particularly one that relies on distance learning to capture market share, will undermine the core value of the educational process.

"We raised our kids as a generation of absentee parents, and now we're going to educate them as a generation of absentee faculty," he says. "The reason people sought out universities in the first place was to help them make sense of the world. We want to educate people to those old Jeffersonian ideals—to become better-informed citizens, not just better workers." □



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