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ABSTRACT

The effectiveness of employment and training (E&T) programs in improving labor market outcomes can be assessed by measuring the impact on the future success of participants. The program with the greatest success in reducing dropout rates among at-risk youth is the Quantum Opportunities Project. Comprehensive Employment and Training Act (CETA) and Job Training Partnership Act (JTPA) programs have been unsuccessful in raising employment or earnings of disadvantaged out-of-school youth, whereas the Job Corps program has shown marked success in improving earnings. E&T programs for young single mothers have produced moderate increases in employment and education levels. Evidence from a Chicago program indicates residential location has a substantial effect on education and employment outcomes for youth. The CETA program for disadvantaged adults produced significant earnings gains for women; JTPA has yielded gains for both men and women. Many programs targeted at poor single parents have produced significant earnings gains. The effects of higher education are very positive and have steadily increased over the past 20 years. Employer-provided training can substantially raise firm productivity and improve worker earnings. At least some services have been successful for every population examined, and many employment services for displaced workers and disadvantaged persons appear to be cost-effective investments. (Two tables of programs for out-of-school youth and of major upcoming evaluations are appended.) (YLB)

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What's Working (and what's not)

A Summary of Research on the Economic Impacts of Employment and Training Programs

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U.S. Department of Labor

Office of the Chief Economist
January 1995

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PREFACE

Two urgent goals are among the highest priorities of the Clinton Administration. One is making government leaner and more accountable. Programs that fail to pay off should be reformed or terminated. The second goal is empowering all American workers with the skills they need to prosper in today's challenging economy. Unless workers are equipped to prosper in an era of rapid technological change and global competition, America's cherished tradition of shared middle-class prosperity will remain imperiled.

In this report, these two imperatives intersect. What's Working and What's Not provides the first comprehensive review of social science evidence on the economic impacts of employment, training, and education programs. Well over one hundred non-partisan studies are reviewed. The report was prepared by the Office of the Chief Economist of the Department of Labor, under the direction of two of America's most distinguished labor economists, Lawrence Katz and Alan Krueger. Dr. Katz has returned to Harvard University after serving as the Chief Economist of the Department of Labor for two years. Dr. Krueger is on leave from his position as Bendheim Professor of Economics and Public Affairs at Princeton University to serve as the Department of Labor's current Chief Economist.

Let me elaborate briefly on what is at stake. The key to national success in the new economy is enabling workers to build and deploy productive skills. Only high productivity can sustain high living standards. And productivity must be substantially skill-driven, not based on technology alone, since technology is an increasingly mobile, decreasingly "national" resource. Thus, creating a culture of lifelong learning, and constructing an institutional structure to give force to that culture, are the core strategies for improving the incomes of ordinary working Americans.

Parts of this strategy are already being implemented. Among them are (1) the "Goals 2000" school reform bill, (2) the School-to-Work Opportunities Act, (3) a program of direct student lending with repayment pegged to income, (4) "one-stop" career centers designed to make reemployment services more accessible, and (5) changes in the unemployment insurance system linked to job search assistance and job training. Others are in process — including welfare reform oriented toward work, reshaping the nation's employment and training system, and changing the tax code to encourage education and training. This effort will empower individuals to improve their skills through improved student loans, skills scholarships for workers seeking new training, and changes in tax law to allow the deductibility of post-secondary expenses.

Yet from the moment we in the Clinton Administration first articulated this strategy we have confronted assertions that job training does not work. Such a blanket judgement is, as I believe this report shows, demonstrably wrong on the facts.

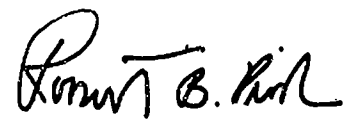
The evidence arrayed in this report presents a detailed picture of the benefits we can actually expect from investments in employment programs. Two overall lessons emerge from the evidence. One is that education and training — while not, on their own, a full remedy to the

declining real wages of working Americans — should be a key part of any solution. The accumulated evidence clearly shows that many education and training programs do produce sizable benefits for their participants, and these benefits are often greater than the costs invested to produce them. For example, there is by now overwhelming evidence demonstrating that a year or more of post-secondary education — including vocational training at a community college — can produce significant long-term growth in income. A convincing independent study has found that the major Federal government training program for disadvantaged adults produces benefits of almost one and a half times its costs within just thirty months after entry into the program. There are other examples of such successes in the body of this report.

But as this report also makes clear, support for education and training is not the complete answer. Even successful education and training programs rarely live up to all the expectations placed in them. Training programs for workers displaced from high-tenure jobs often do not allow participants to make up all the earnings losses resulting from their job loss. Training programs alone often cannot lift disadvantaged participants entirely out of poverty. And for some selected subgroups — such as economically disadvantaged youth — training programs have at best a mixed record of success. Education and training cannot be the sum total of our response to the problems that face American workers.

Confronted with well-known data showing falling incomes for a broad range of less educated American workers, I suggest that we have three choices. One is to attempt to reverse the erosion of living standards and growth in inequality without improving the productive skills of American workers at the low end of the skills distribution. I simply do not believe this is possible. A second proposition is that while skills do matter greatly in the modern economy, there is not much that government can do to increase the average level or improve the distribution of skills. As a result, a third-world future awaits many American workers — a proposition I find viscerally repellant. Fortunately, it is also at odds with the facts. The third option is to continue and even expand our efforts to improve the productivity and earning power of those persons who need such assistance. The evidence suggests that is is possible — not easy, not automatic, but possible — to make such improvements.

Demonstrating this possibility does not clinch the debate on education and training programs, of course. But it does serve to shift our national conversation away from mournful epics of inevitable decline or attempts to place the blame, and toward a more pragmatic discussion of what works to help all American get ahead, and what does not. Our goal should be to bolster the former while eliminating the latter.



Robert B. Reich
Secretary of Labor

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SUMMARY

This review summarizes the best quantitative evidence that is available from the evaluation literature on the impacts of past and existing programs on such tangible outcomes as employment, earnings, and educational achievement. It relies to the extent possible on studies that use a random assignment approach. Programs that target youth (age 14 and over), disadvantaged adults, and displaced workers are reviewed. All dollar figures are expressed in terms of their equivalent value in 1993 unless otherwise indicated.

Education and Jobs for Youth 14 to 21

This section examines programs that aim to facilitate young people's movement into first jobs. It also discusses several programs that have tried to help high school students at risk of dropping out.

In-School Youth: As discussed below, it has proven difficult to improve the labor market prospects of youth who drop out of high school. This underscores the importance of efforts to reduce the number of dropouts. Existing research on dropout prevention efforts indicates that such programs can and often do work well, but they are difficult to operate effectively. Many programs have increased high school graduation rates, but many others have not.

Perhaps the most notable recent success among programs for in-school youth is the Quantum Opportunities Project (QUOP). The program provided intensive academic assistance, mentoring, counseling, and college planning to randomly selected children in AFDC families starting in the ninth grade. A four-year random assignment evaluation found that QUOP participants were far more likely to graduate high school and go on to college than members of the control group. Fully 42% of QUOP students went on to college, while only 16% of the control group did.

There are a number of other programs reviewed below which have shown success in reducing dropout rates among at-risk youth. For example, several programs funded as part of a series of U.S. Department of Education demonstrations, which focused on at-risk youth in vocational education were quite successful. Two large projects which were evaluated using random assignment techniques succeeded in cutting dropout rates by over 50%. However, some of the smaller demonstration projects were not as successful.

Some other programs have produced more ambiguous results. The Summer Training and Employment Program (STEP) was a summer program which provided disadvantaged youth with remedial education and jobs. Elements from the STEP demonstration have been incorporated into the educational elements of the Department of Labor's Summer Youth Employment and Training Program.

At the end of two summers in STEP students show significant improvements in achievement test scores at a low cost. Despite the short-term improvements created by the program, when STEP graduates are reexamined several years later they show no improvement in graduation rates. The STEP experience may show the limitations of short-term summer programs alone in addressing the serious disadvantages faced by some youth.

Another approach to assisting in-school youth is through subsidized employment. This approach appears to have been successful in greatly increasing employment and earnings among disadvantaged youth during the period that the subsidized job is provided. That is, many of the youth employed by subsidized employment programs would not have found other jobs in the absence of a government funded jobs program. But evidence is lacking or negative on longer-term effects.

The Summer Youth Employment and Training Program (SYETP) provided summer jobs to 620,000 disadvantaged youth in 1993. The program appears to greatly increase summer employment rates among disadvantaged youth in sites where jobs are provided. Using data on minority employment and SYETP placements in various states, researchers estimate that for every 3 SYETP jobs provided, 2 youth are employed who would otherwise not have worked that summer. There was little evidence of displacement found. However, researchers have not yet investigated whether SYETP creates positive long-term impacts on employment after participants leave their summer jobs.

More information about SYETP comes from a recently completed survey of program participants and their employers. Ninety percent of respondents (both participants and supervisors) reported that the work performed was useful to the employer.

The Youth Incentive Entitlement Pilot Project (YIEPP) was a demonstration program active from late 1978 to early 1981 which guaranteed full-time summer jobs and part-time school year jobs to disadvantaged youth who stayed in school. Disadvantaged youth aged 16 through 19 who had not graduated from high school were eligible for the program. All the jobs offered were at the minimum wage.

YIEPP appears to have roughly doubled the employment rates among 16 to 18 year old disadvantaged black youth at program sites. This dramatic increase in employment indicates that these disadvantaged youth wanted to and did work once they were given the chance. But YIEPP did not succeed in its major educational objectives. Despite the school enrollment requirement attached to the jobs, researchers estimated that the growth in employment under YIEPP did not lead to increased rates of high school enrollment or graduation for program participants.

Disadvantaged Out-of-School Youth: Much evidence is available on employment and training programs for disadvantaged out-of-school youth such as high school dropouts. The findings include:

- Relatively short-term (3 to 6 month) skills training was provided to disadvantaged youth under the Comprehensive Employment and Training Act (CETA), the government's

major training program for disadvantaged youth during the 1970s, and the Job Training Partnership Act (JTPA), which replaced CETA in the 1980s. Both of these programs have been found to be unsuccessful in raising youth employment or earnings. However, there was only a limited differential in training hours between JTPA youth and the control group they were compared to. This limited "treatment" differential makes it difficult to find the kind of moderate but positive impacts that could be expected to emerge from short-term classroom training. Nevertheless, it does not appear that short-term youth training has significant positive impacts. This finding differs sharply from the findings for disadvantaged adults.

- In contrast, the residential, high intensity Job Corps program, which costs about 4 to 5 times what JTPA Title II training does and takes about a year to complete, has shown marked success in improving future earnings. A late 1970s study found that Job Corps youth — who come from very disadvantaged backgrounds — experienced an average annual earnings increase of 15% (or around $1,000) over a four-year follow-up period. Participants also committed fewer serious crimes. The study estimated that the program creates benefits to society about 45% greater than its costs.

- The Jobstart demonstration tested various approaches to short-term, moderately expensive training for youth. Overall, and at 12 of the 13 sites, participants fared no better than the control group. The exception was the San Jose Center for Employment and Training (CET), which had very impressive results. Annual earnings for participants improved by over $3,000. CET is marked by an emphasis on vocational skills training, in which basic academics and vocational instruction are closely intertwined. The program has also forged very close connections to the local labor market. The CET example suggests that short-term youth training can work if it is provided with a strong labor market orientation.

- Consistent with the findings for in-school youth, subsidized work experience for disadvantaged out-of-school youth has produced substantial gains during the period of subsidized employment. However, it has generally not had long-term positive effects on employment or earnings.

  It may be possible to combine subsidized employment with some form of education, training, or connecting activity in order to create lasting improvements in labor market outcomes for youth. There is some limited evidence of positive outcomes from a pilot program (Alternative Youth Employment Strategies) that did this, but further experimentation is needed.

- Job search assistance may produce short-term benefits for disadvantaged youth, but the evidence is mixed — some models have worked and some have not. Several relatively intensive and expensive job placement programs have succeeded in creating significant short-term earnings gains (mostly resulting from increased hours worked) for youth. However, youth recommended for job search assistance in the JTPA evaluation did not show gains in average earnings.

Young Single Mothers: A number of studies have examined targeted education and training programs for young (16 to 21 year old) single mothers. Many (though not all) of these interventions have produced moderate increases in participants' levels of employment and education. Programs that include strict mandates for participation have had some moderate success in improving outcomes for these young women, while voluntary interventions targeted at the most troubled teen mothers (those who had already left school and remained out for long periods) have had the least success. But the overall level of poverty, welfare receipt, and high school dropout is disappointingly high even after participation in successful assistance programs.

Residence and Youth Outcomes: Evidence from a Chicago program ("Gautreaux") indicates that residential location can have a substantial effect on education and employment outcomes for youth. Through the program, poor black families, mostly on welfare, were given the opportunity to move from inner-city Chicago to predominantly white middle class suburbs outside the central city. Researchers compared a group of families who had been given the opportunity to move to these suburbs to a very similar group of families who were given the chance to move to other parts of the central city. They found that 7 years after moving, youth who moved to the suburbs had far higher rates of high school graduation and college enrollment than those who stayed in the city. The suburban youth also had much higher employment rates and wages.

Programs for Disadvantaged Adults

A number of training and job search assistance programs for disadvantaged adults have been found to improve earnings significantly. However, training programs alone often cannot lift many disadvantaged participants above the poverty line. These programs have proved to be cost-effective investments for society.

The CETA program for disadvantaged adults produced significant earnings gains for women participants, while JTPA yielded significant earnings gains for both men and women. The success of these short-term programs for adults is in marked contrast to their disappointing results for youth.

The evidence for JTPA is particularly persuasive, since it is based on a large-scale experimental design. This research found that JTPA participants earned an average of about $940 more than controls during the second year after leaving the program. This represented an increase of 10% for men and 15% for women over what they likely would have earned without JTPA participation. However, these earnings gains did not result in significant declines in welfare receipt.

The impacts of the program varied by the type of services provided to participants. In general, short-term classroom training was the least successful and a combination of on-the-job training and job search assistance was the most successful.

These earnings gains were substantially greater than the costs invested to produce them: JTPA

services for adults produced social benefits about 50% greater than their costs within just 30 months of enrollment in the program. It is likely that greater benefits would have been shown if participants had been tracked for a longer period.

Poor single parents: Many training programs are targeted specifically at poor single parents. Some are voluntary training courses, while others are required for recipients of Aid to Families with Dependent Children (AFDC) benefits. Many of these programs have produced significant earnings gains for their clients. But because of the low earnings available to less-skilled women, training programs alone are usually not sufficient to lift them out of poverty. (The scheduled expansion in EITC benefits will improve this situation somewhat. By 1996 the EITC will add up to $4 for every $10 earned by very low-income families with children.)

There is a compelling case for the effectiveness of subsidized employment approaches in helping this population. Two successful large-scale demonstrations — the Supported Work demonstration and the Home Health Care Aide demonstration — provided subsidized employment. Subsidized employment approaches are distinguished from simple workfare -- an approach that has not had much success in improving employability among welfare recipients -- by an emphasis on developing real job skills, the provision of support services, and subsidized jobs that closely simulates the experience of working in unsubsidized private-sector environments.

Both demonstrations produced average earnings gains of about $1,500 to $2,000 annually during the first and second years after program exit. These earnings gains were lasting — they were still significant when participants were examined 5 to 8 years after exit from the programs (although they faded somewhat in magnitude). Both programs were cost-effective for society, and reduced AFDC payments significantly. Despite these successes, the programs did not produce significant declines in the poverty rate among participants.

Another form of subsidized employment, on-the-job training, has had considerable success in helping adult AFDC recipients. According to the JTPA evaluation, adult women receiving AFDC who were recommended for the on-the-job training component of JTPA had average annual earnings gains of about $2,000.

Conventional voluntary classroom and vocational training models have had a more mixed record of success with single parents. The Minority Female Single Parent Demonstration tested different training models at four sites. Only one site, the San Jose Center for Employment and Training, created strong positive impacts on participants' earnings and employment (this was the same program that showed positive results for disadvantaged youth). Earnings gains at CET averaged about $1,500 during the second year after program exit.

"Welfare to work" programs for poor single parents: These programs mandate education and/or job search for AFDC recipients. The numerous evaluations of these interventions have found that:

- Mandatory programs generally produce significant but modest positive effects on earnings and employment and slight declines in welfare recipiency. Average earnings gains

generally range from $300 to $700 annually, with accompanying declines in average annual welfare payments in the same range. Some sites have been more successful — participants in the Riverside County program in California increased their average annual earnings by over $1,000, or 40%. Earnings and employment gains have generally been found to "fade out" within 5 years.

- Even with these moderate improvements, welfare-to-work programs have often been cost-effective, with reduced welfare payments and increased tax receipts outweighing program costs.

- Overall levels of poverty, welfare receipt, and unemployment remain high even after participation in these programs. For example, 80% of participants in California's welfare-to-work effort had family incomes below the poverty line 3 years after entering the program.

- Programs oriented toward job search have so far been more successful than programs emphasizing basic education.

Other Sources of Education and Training

This section discusses research on the effectiveness of our major post-secondary education institutions, as well as the role of employer-provided training.

Post-secondary institutions play a critical role in the employment services system. Government programs rely on such schools for many of the actual training services provided at the local level. For example, much training for displaced workers is carried out through community colleges.

Basic Education: Several studies have examined the impact of receipt of the General Equivalency Diploma (GED), the major basic education credential that out-of-school adults can seek. The emerging consensus on the impact of GED receipt is that when compared to high school dropouts, GED recipients show little gain in earnings or employment due to GED receipt alone. However, there is a modest positive impact of obtaining a GED on receipt of further post-secondary training, and this further training does produce some small earnings gains. In general, though, GED recipients appear to fare only slightly better in the labor market than seemingly comparable high school dropouts.

The GED appears to have more of a credentialing than a training effect. Most GED recipients study for just a few weeks in preparation for the test, which is unlikely to be enough time to greatly improve skills.

Reliable evidence on the impacts of more intensive adult basic education programs is scarce. However, studies of the impact of compulsory schooling laws have found evidence that these laws do result in measurable improvements in earnings and employment. Since compulsory

schooling laws tend to affect students who are the least advantaged and the least academically skilled (other students remain in school without legal mandates), this suggests that basic education programs for the disadvantaged have a positive long-term effect.

Post-Secondary Education: Extensive evidence is available on the benefits of post-secondary education for its graduates. The effects of higher education are very positive, and have been steadily increasing over the past 20 years:

- A year of post-secondary education is generally estimated to generate increased earnings in the range of 6% to 12%, and these earnings increases appear to last throughout one's career. These estimates adjust for differences in preexisting ability levels between college students and others.

- The income returns per year of credits completed are roughly similar for 2-year community colleges and 4-year colleges.

- Substantial earnings increases appear to result from completed post-secondary credits whether or not students finish formal degree programs.

- According to Census Bureau data, the gap between the median earnings of males with a bachelor's degree or more and males with only a high-school degree has doubled from 39% in 1979 to 80% in 1993.

Employer-Provided Training: Employers themselves are a major source of training for their workers. Researchers are just beginning to seriously examine the impacts of employer training, but the early evidence is promising. Several studies indicate that employer-provided training can substantially raise firm productivity and improve worker earnings. However, it is difficult to draw firm conclusions about the magnitude of the impact at this time.

New Jobs: Re-Employment Programs For Displaced Workers

Many dislocated workers have great difficulty finding new jobs that pay wages close to what they earned on their previous job.
A variety of reemployment programs for dislocated workers have been tested, ranging from conventional training programs to bonuses paid upon receipt of a new job. Although many of these approaches are still experimental and are being used only in a few pilot programs, they have frequently been the subject of careful evaluations. The results indicate:

- Job search assistance targeted at dislocated workers who are identified as likely to be unemployed for a long period speeds the process of obtaining a new job. Experiments testing this approach in five states found that these services created significant reductions in Unemployment Insurance (UI) costs. Dislocated workers receiving job search assistance found work from about one-half a week to four weeks more quickly than they

otherwise would have, with an average reduction of about one week in most states. There appeared to be no effect on weekly wages, indicating that workers did not have to settle for lower-paying jobs in order to find work more quickly.

Shortening the duration of unemployment spells produces large savings in the aggregate. Government saved about two dollars for every dollar invested in targeted job search assistance services.

- Early intervention seems to be useful. Early intervention was one of the keys to the successful job search assistance experiments for UI recipients, and an evaluation of the JTPA training program for dislocated workers found that those localities which aggressively marketed services to workers early in their spell of unemployment were more successful in finding jobs for clients.

- Self-employment assistance programs significantly improve unemployed workers chances of starting a successful new small business, and improve their overall likelihood of employment. Two demonstrations found that about 50% of participants in self-employment programs started their own business, as compared to only 25% of similar persons interested in starting a business who did not receive self-employment assistance. However, these programs are only suitable for a small percentage of unemployed workers.

- Reemployment bonus programs, which pay a reward to an unemployed worker when they find a new job before exhausting unemployment benefits, seem to accelerate the return to work. However, the evidence is mixed. Most experiments have found that the bonus offer decreases the average time spent receiving UI, but the effect on the actual amount of UI benefits received was usually too small to repay the cost of the program to government.

- Existing evaluations of short-term training programs for dislocated workers suggest that they do not significantly raise employment or earnings beyond the gains that would be expected from job search assistance alone. However, further research in this area would be useful, since the existing studies have some methodological problems.

- A recent study of long-term training for displaced workers in Pennsylvania finds that training for these workers did result in significant increases in earnings. The training seemed to bring social benefits at least equal to its costs. The evidence from this evaluation also indicated that only a minority of displaced workers are likely to seek long-term training.

More general evidence on the impacts of post-secondary education, especially findings of substantial returns from community college education, also provides overwhelming evidence of the positive effects of long-term training. In addition, the steady increase in the rewards for post-secondary education indicates that advanced skills are becoming more valuable in the workplace.

But few studies are available which test the effectiveness of long-term training specifically for dislocated workers.

Conclusions

Impacts By Type of Service Provided: Four basic types of employment services are commonly provided. The actual effects of these types of services naturally vary greatly depending on the quality of the program staff, the exact approach used, and the population being served. However, some general conclusions can be drawn based on the type of training services that are offered:

Job Search Assistance (JSA) has produced significant short-term positive impacts for every population group. The results for youth are somewhat mixed, though, as some JSA interventions have succeeded and some have not. JSA appears to accelerate the process of finding a job, but not to have a lasting effect on the quality of job obtained.

JSA is generally one of the cheapest types of interventions. So JSA is usually a worthwhile investment, with benefits outweighing costs by a substantial amount.

Short-Term Classroom Training. The impacts of relatively short-term (3 to 6 month) classroom training have in most cases not been particularly positive, especially for youth. However, the experience of the San Jose Center for Employment and Training shows that such training can have strong positive effects when it is closely tied to the labor market and very well implemented. In addition, classroom training has produced modest earnings gains for disadvantaged adults in the JTPA program. Results for programs which provide short-term training to displaced workers are not particularly encouraging so far.

Long-Term Classroom Training. There have been few direct studies of government programs which provide this type of training. But a substantial amount of research shows that returns to each year of community and 4-year college education are high, and this suggests that long-term education pays off. A recent evaluation of long-term community college training for dislocated workers has found earnings increases of 6% to 7% per year of education completed. These findings suggest that it is important to make the option of long-term training available to those displaced workers who need to update their skills.

Finally, the Job Corps experience also shows that longer-term training can work well for very disadvantaged youth, if it is combined with extensive support services and delivered in a residential setting.

Subsidized Employment. Subsidized employment involves the provision of short or long-term employment, often with a private sector firm. In on-the-job training, government provides a partial subsidy to a private sector employer to hire and provide training to a disadvantaged individual. Other models simply provide a term of subsidized employment with a private firm or government agency, often followed by job search assistance.

OJT and its supported work variant have proven quite successful for single mothers who are on welfare. The record in helping other adult populations is more sketchy, but generally positive. Adult women obtained significant employment gains when enrolled in OJT in the CETA program, while both adult men and adult women have been found to benefit from the on-the-job training provided in the JTPA program.

Subsidized employment programs for disadvantaged youth have boosted employment considerably during the program period. This indicates that disadvantaged youth want to and will work when given the chance. But subsidized employment programs alone have not been successful in producing lasting gains in employment or earnings for youth participants once the program was over. Linkages to other training services are apparently needed if this approach is to produce permanent gains for youth. The creation of pathways between temporary subsidized jobs and permanent employment may also be a promising approach.

Overall Conclusions: The evidence leads to several findings:

1) At least some services have been successful for every population examined. Employment-related services have produced significant gains in earnings and employment for disadvantaged adults and youth, single mothers, and displaced workers.

2) Interventions have larger net impacts on some populations than on others. With some exceptions, such as the Job Corps and the CET program, most interventions for disadvantaged out-of-school youth have not shown measurable long-term success. In contrast, programs for disadvantaged adult women have often produced positive impacts.

3) Results from successful programs are significant but moderate on average. The improvements created by employment and training programs do represent real gains for society and for the individuals involved.

However, education and training programs are often not able to accomplish all the goals set out for them. Training programs for the disadvantaged often do not lift the average participant out of poverty, even when they succeed in significantly increasing participant earnings. In the case of workers displaced from high-tenure jobs, on average even a year or two of training will probably not create income gains large enough to restore earnings to their pre-displacement level. But on average, participants in successful training programs do receive earnings that are substantially greater than they would have obtained without the program.

4) Many employment services for displaced workers and the disadvantaged appear to be cost-effective investments. Returns to society of $1.40 or more per dollar invested have been found in reliable evaluations of JTPA training for disadvantaged adults, the Job Corps, the San Jose CET, many welfare-to-work programs, and job search assistance for displaced workers.

5) It is important to make a wide variety of training and employment programs accessible to workers. Both successes and failures among training programs have been common. This argues against a "one-size fits all" approach and for an attempt to make a wide variety of choices avail-

able to those who need to upgrade their skills. For example, for displaced workers the combination of poor or uncertain impacts from short-term training and promising evidence on formal long-term training suggests that it is important to make long-term training a real option for those workers who need it.

6) It appears to take time for programs to begin to work. Many of the success stories in training for the disadvantaged have come from programs which were operating for 5 years or more before they were evaluated. This finding suggests that the knowledge and experience built up through years of practice may be an important factor in determining a program's success.

7) Only a limited range of interventions have been tried, and even fewer have been evaluated. For example, most training programs for the disadvantaged have been short-term and not particularly intensive. Also important is the fact that employment and training programs have rarely been able to saturate a single neighborhood or community, and have rarely been combined with a range of other interventions directed at the same areas. There is evidence that such a comprehensive approach may be more successful than isolated interventions.

8) Continued progress requires additional evaluation evidence. There are many areas where little thorough and reliable evaluation evidence is available. For instance, there is only one reliable impact evaluation of a long-term training program for displaced workers. Little evidence is available on the impacts of company-provided training for incumbent workers. In some other areas, many of the programs tested have been small-scale, raising questions about whether they can be replicated.

SECTION 1: INTRODUCTION

The purpose of this paper is to summarize the most compelling findings from the quantitative literature on the effectiveness of training and employment services in improving labor market outcomes. What are the prospects for positive impacts from such interventions? Which approaches have worked and which have not?

These questions have become more important in recent years. Over the past two decades the dream of economic security has faded for many. The overall economy has grown over this period, but those Americans without advanced levels of education and training have not fully reaped the benefits of this growth. While college graduates and those with other post-secondary training have maintained and in some cases increased their real earnings, high school graduates and dropouts have seen declines in real wages.

This pattern of increasing inequality by education level is not unique to this nation, although it is particularly marked here. Over the course of the 1980s, education and training have became increasingly important to economic success in almost every advanced industrial nation that economists have studied.[1] Technological and structural changes in the world economy place an increasing premium on advanced problem-solving skills.[2]

All this makes it an appropriate time to step back and review what we know about the effectiveness of training and employment services in this country. The vast body of evaluation literature that is available helps us do this.

The Nature of the Evidence

There are many ways of looking at the effectiveness of employment and training programs. One can examine how they were implemented, qualitative descriptions of their effect on participants, their effect on some measure of participant skills (such as test scores), client satisfaction with the program, etc.

This report focuses on one particular test of effectiveness --the measurable impact of the program on the future success of its participants. That is, do those who participate in the program find employment more easily than they would have if they hadn't participated? Are their earnings higher? What are the magnitude of these changes? Do other positive outcomes result from the services they have received -- higher educational achievement, less welfare dependency, less participation in crime? Even if positive outcomes do not result, this is valuable evidence as well, since it teaches us what doesn't work for a particular population.

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[1] "Earnings Inequality: Changes in the 1980s", in OECD Employment Outlook, Organization for European Cooperation and Development, 1993. Freeman, Richard B. and Lawrence Katz, "Rising Wage Inequality: The United States vs. Other Countries." In Working Under Different Rules, R.B. Freeman, Ed. New York: Russell Sage Foundation, 1994.

[2] Levy, Frank and Richard Murnane, "U.S. Earnings Levels and Earnings Inequality: A Review of Recent Trends and Proposed Explanations", Journal of Economic Literature, September, 1992. Freeman and Katz, op. cit.

Note that these questions are different than asking whether graduates of the program do well or badly. Graduates who do well may be no better off than they would have been without the program. Similarly, even if graduates do badly, they might have done even worse without the intervention. Assessing net impacts requires comparing program participants to a group of similar individuals who did not participate in order to determine the difference made by the program.

The most appropriate method of making this comparison is an experimental design which randomly assigns individuals to either a treatment group, which can receive services from the program under study, and a control group which cannot.[3] The impact of the program is then assessed by comparing the average earnings and employment of the treatment group to those of the control group. If these differences are statistically significant, they are ascribed to the effects of program participation.[4]

When these experiments are well designed and implemented, on average the only difference between the experimental and the control group will be that the former are eligible to receive program services and the latter are not. Thus, the difference between the labor market success of the two groups can reliably be ascribed to the effect of the program being evaluated. Wherever possible, the evidence presented in this paper comes from experimental designs using random assignment.

But conducting a good random-assignment experiment involves a great deal of difficulty and expense, and it is often not possible to evaluate programs using such experiments. Where this type of evidence was not available, we have used well designed "quasi-experimental" studies.[5] These studies use a carefully matched "comparison group" rather than a randomly assigned control group to determine treatment effects. That is, a group of people who appear to resemble the program participants in all observable ways (age, income, race, geographic location, etc.) are selected and tracked. If the labor market success of program participants differs from that of comparison group members, the difference is presumed to result from the program.

There are many pitfalls involved in the use of such quasi-experimental designs. It is often almost impossible to find a comparison group that resembles the control group in all relevant ways. Even if comparison group members appear similar to program participants in their observable characteristics, it is possible that unobservable characteristics like motivation to

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[3] See Ashenfelter, Orley, "The Case for Evaluating Training Programs With Randomized Trials," Economics of Education Review, Vol. 6, Number 4, 1987.

[4] Generally, evaluators are willing to accept that a difference between two groups is real when that difference is "statistically significant." Statistical significance is determined by a mathematical test which finds the likelihood that a difference would occur through random chance, instead of because of the effect of the services received by the treatment group. Usually, evaluators will put substantial weight on a result if there is no more than a 5% or 10% probability that it occurred through random chance.

[5] Meyer, Bruce, "Natural and Quasi Experiments in Economics," Journal of Business and Economic Statistics, forthcoming, 1994.

work differ between the groups. For example, in some cases only the most motivated members of a given class of people will sign up for a training program. One would have expected these motivated individuals to show greater success than their peers, even if they hadn't been in training. For these reasons, quasi-experimental studies sometimes ascribe to the program effects that are actually due to pre-existing differences between the comparison group and the participants.

We have used only well-designed quasi-experimental studies, which matched comparison groups on the basis of a wide variety of characteristics, or allocated to treatment and control groups more or less randomly.

No methodology is foolproof, though, and even careful experimental or quasi-experimental studies are no exception. It is possible for even these studies to produce estimates of the total impacts of education and training that are either too small or too large. One reason that careful studies can underestimate training impacts is that members of the control or comparison group often receive some education and training services themselves from other programs besides the one that is being evaluated. Thus, the evaluation results show only the additional impact of the particular training program being evaluated beyond any other services that are available in the community. This means the impacts from these studies are often a low estimate of the total effects resulting from participation in employment programs.

A second reason for downward biased estimates is that in many studies not all members of the experimental group actually participate in the training -- many drop out or do not even enroll on being offered services. To a certain extent, this is a legitimate effect of individual motivational differences that are also present in the control group. However, it may also water down the actual impacts of training on those who do enroll.[6]

Other potential problems in interpreting random assignment experiments emerge from the difficulty in generalizing from a demonstration project to how the program will look when it is fully implemented. For example, demonstration programs often evaluate a training effort before program personnel have much experience with using the model. If the program were implemented on a wider scale, the staff could work out the problems over time. On the other hand, both the clientele and the staff of a special demonstration program may be more motivated and more carefully selected than they would be in a large-scale program. This may cause the treatment effects in an experiment to differ from what the effects of a more routine, large-scale program would be.

Finally, there are several other issues that stem from the inability of these studies to measure the indirect effects of programs on those who do not participate in them. One is potential displacement effects -- the possibility that successful program graduates take jobs away from other persons who would have received them, so that the positive effects of the program are offset by job losses among non-participants. Not including these displacement effects leads to an upward bias, or an overstatement of the benefits of the program.

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[6] With statistical assumptions, estimates can be adjusted to take this into account.

However, there is related phenomenon that may cause studies to understate the positive outcomes of interventions, and this is the presence of spillover or "neighborhood" effects. Improving the employment outcomes of some persons within a community could lead to "spillover effects" as other people in the neighborhood imitate the positive actions of their peers. For example, researchers have found that youth are more likely to work if a large proportion of their peers also work.[7]

Perhaps the most serious shortcoming of depending solely on the best quantitative impact studies, though, is that so few are available. Of the thousands of local training programs active around the country over the last decade, only a few dozen have been the subject of rigorous impact evaluations. Because of this, it is almost certain that many successful and unsuccessful programs will escape our attention in this review.

Finally, it should be understood that no single study can provide us with all the evidence we need to understand how a program works. It takes an accumulation of evidence from many sources to allow us to fully judge success, and to determine the reasons why a program succeeds or fails. These sources should include not only quantitative evidence on impacts, but qualitative descriptions of the way the program works.

Special Note

All dollar figures in this paper are expressed in terms of their purchasing power in 1993 unless otherwise indicated.

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[7] Case, Anne and Lawrence Katz, The Company You Keep: The Effects of Family and Neighborhood on Disadvantaged Youth, National Bureau of Economic Research, 1991; Mayer, Susan "How Much Does a High School's Racial and Socioeconomic Mix Affect Graduation and Teenage Fertility Rates?" In C. Jencks and P. Peterson (eds), The Urban Underclass, Washington, D.C.: The Brookings Institution, 1991.

SECTION 2: FIRST JOBS FOR YOUTH UNDER 21

The major route for youth labor market preparat on is the educational system -- a high school diploma followed by college for those who are al le to undertake it. Specialized youth training and employment programs have historically focused on young people who are either high school dropouts or at risk of dropping out.

Programs For In-School Youth

In-school programs for young people at risk of dropping out are critical because the evidence shows that it is very difficult to help young people once they have dropped out of high school. As discussed below, few training programs for high school dropouts have been effective. These discouraging results make it very important to help young people before they drop out.

Only a few of the many dropout prevention programs existing in high schools have been rigorously evaluated.[8] It is likely that many successful programs have escaped the attention of reviewers because of the lack of good evaluations. Fortunately, better information on such programs is gradually becoming available.

Although the state of the research makes conclusions somewhat premature, two general observations emerge from the existing studies:

- Dropout prevention efforts can work, but they are not easy to operate effectively. A number of programs have been reliably evaluated and found to substantially reduce high school dropout rates. But some other attempts at preventing high school dropout have not been successful.

- It is difficult to make short-term gains last. Several programs have shown a pattern of large improvements in attendance and academic achievement during the first year of the program. But these initial gains often disappear over the next few years.

Academic/Educational Programs

The Quantum Opportunities Program (QUOP) is one of the most encouraging educational efforts to be evaluated in recent years.[9] The program is managed by community organizations,

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[8] Adelman, Nancy, Description and Research Findings About Education Programs for Adults and At-Risk Youth, Policy Studies Associates, 1991; Grossman, Jean, What We Know About Youth Programming, Public/Private Ventures, Draft, August 1993. Both of these papers review existing evidence and conclude that there is little quantitative evidence available on the long-term impacts of remedial education.

and offers extensive academic assistance (tutoring, help with homework, etc.), adult mentoring, career and college planning, and small stipends for participation. Students also received payments into a trust fund set aside for post-secondary education. The major focus of the program was on maintaining continuing adult support for the students over the entire high school period.

QUOP services were provided to children from AFDC families starting in the ninth grade and continuing throughout high school. Over four years, the average QUOP student participated in 1,286 hours of educational activities and accumulated $2,300 in their post-secondary account. Average 4-year costs per QUOP enrollee were $10,600.

An unusual feature of the demonstration was that services were offered to young people randomly selected from a list of children in AFDC families living in five poor communities. This meant that program administrators were not able to select the most motivated or capable disadvantaged students; QUOP provides a strong test of the effectiveness of an educational intervention for typical children of welfare families in poverty areas.

The QUOP evaluation compared 100 participants at four sites to 100 randomly selected control students who were also from AFDC families at these sites.[10] At the end of the demonstration period, 63% of the QUOP students were high school graduates as compared to 42% of control group members. And the majority of QUOP enrollees who hadn't yet graduated high school were still enrolled and working toward their degrees -- just 23% of QUOP students were classified as high school dropouts, while 50% of control group students were. QUOP students were also less likely to have had children -- 38% of the control group were parents, but only 24% of the treatment group were. Another striking figure is that 42% of the QUOP group were enrolled in post-secondary education, whereas only 16% of control students were. All of these differences were statistically significant, most of them highly so.

The success of the program varied widely by site. Some sites were spectacularly successful, while others lost track of half their students by the end of the period. At one site implementation broke down completely and the program was canceled in the middle of the demonstration period. At the other end of the spectrum, the Philadelphia site was able to send a remarkable 72% of its participants on to post-secondary education.

But participants fared considerably better than non-participants at all sites, even where the implementation at the site was not as successful as it was in Philadelphia. Apparently, the simple act of keeping supportive adults consistently available to these youth for a long period was enough to produce a positive impact.

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[9] Hahn, Andrew et. al. Evaluation of the Quantum Opportunities Program: Did the Program Work?, Brandeis University, Waltham, MA: June, 1994.

[10] Originally, the study was supposed to include 5 sites. But implementation at one site broke down completely and the funders lost track of almost the entire sample.

A series of U.S. Department of Education demonstrations has produced reliable evaluation evidence on a number of high school dropout prevention programs.[11] All of the sites were evaluated using random assignment techniques, and all used dropout prevention models with a vocational education dimension, and enrolled students beginning in the tenth grade or after. Most combined vocational counseling and skills training with individualized tutoring and academic help.

The sites can be separated into two groups. One set of four sites was located on Indian reservations in North Dakota and enrolled exclusively Native Americans. Programs at these sites faced very depressed economic conditions, often with unemployment rates of 75% or more, and experienced severe resource shortages which prevented them from fully implementing their intended models. The programs generally included individual tutoring, some skills training and vocational guidance, and payments for school attendance. When findings from the four sites are grouped together, the results indicate no significant impact on dropout.

The other five random assignment sites were located in settings that ranged from urban schools in Detroit, Michigan to rural areas in Oconee, South Carolina. The models used in these sites varied, but they all included a strong vocational dimension (including vocational courses), and academic assistance.

The largest two random assignment sites did produce sharp and significant positive results, cutting high school dropout rates by more than half over a two-year follow-up period. These sites, in Detroit and Oklahoma, had sample sizes of almost 200 students each, making their results quite precise. The smaller three sites were not successful in reducing high school dropout rates.

The successful sites were located in Detroit, Michigan and in Cushing, Oklahoma. They provided supplemental counseling, special study materials, and intensive tutoring to students enrolled in area vocational-technical high schools. No work experience or mentoring was involved. Both of these sites were evaluated using a random assignment design. The Detroit project cut two-year dropout rates from 26% for the control group to 11% for the treatment group, while the Cushing project cut dropout rates from 22% to 10% over two years. These sites were evaluated using random assignment techniques.

Several other sites were not able to produce reductions in dropout rates for their students by the end of the two year evaluation period. The models used at these less successful sites did not appear to differ greatly from the others. They featured vocational training, basic skills remediation, small class sizes, and counseling.

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[11] Hayward, Becky and G. Tallmadge, Evaluation of Dropout Prevention and Reentry Projects in Vocational Education, Draft Final Report, Research Triangle Institute, November, 1993.

It is difficult to generalize about the reasons why some of these programs succeeded and others did not. The reasons for success may rest more with the details of local implementation than with the abstract outlines of the model used.

The Summer Training and Employment Program (STEP) provides remedial academic education, sex education, and summer jobs to disadvantaged youth aged 14 to 15. It is a large-scale demonstration program run in tandem with the JTPA Summer Youth Employment Program, serving as an academic component which youth participate in when they are not working at their summer jobs. STEP lasts for 2 summers. Each summer session lasts for 2 months and includes 110 hours of classes and 90 hours of part-time work. Over half of STEP enrollees report having failed one or more grades in school, and on average their reading skills are about one to two years behind their actual grade in school.

The academic impacts of STEP have been rigorously evaluated using an experimental design.[12] Short-term results for academic achievement were quite positive:

- After two summers in STEP, students had gained an average of seven-tenths of a grade in reading and four-tenths of a grade in math more than their non-STEP counterparts.

- Previous studies had found that "summer learning loss" -- a regression in test scores that occurs over the summer due to the break from school -- was a major problem for at-risk youth. A number of studies have found that disadvantaged students lose far more in academic achievement over the summer than other young people do.[13] STEP successfully countered this summer learning loss.

- These strong academic gains were achieved at a modest cost. For each student, STEP cost just $600 more than the already existing summer jobs program. Total expenditure for the summer job and the STEP curriculum was about $1,600 per student per summer.

But these positive STEP impacts did not seem to translate to improved school performance over the long run. STEP graduates were examined again at age 17 to 19, two to three years after leaving the program. By this time, they did not have higher graduation rates or grades than the control group. They were also no more likely to be working than control group members. Girls enrolled in STEP were just as likely to have had a child by age 17-19 as control group girls were, despite the sex education component of STEP.

STEP is successful in that it produces short-term academic gains at a low cost and prevents summer learning loss, but summer programs alone do not seem to be sufficient to improve the

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[12] Grossman, Jean Baldwin and Cynthia Sipe, The Long-Term Impacts of the Summer Training and Education Program, Public/Private Ventures, 1992.

[13] Heyns, Barbara, "Schooling And Cognitive Development: Is There A Season for Learning?," Child Development, 1987, Vol. 58, 1151-60.

long-range educational prospects of disadvantaged students. In any case, the short-term, low-intensity nature of a program like STEP should probably not lead us to expect lasting impacts from it.

Looking back at the experience, researchers felt that the lack of effective school-year follow-up to the summer STEP experience was a major weakness in the program.[14] If effective follow-up programs to STEP can be designed to operate during the school year then summer programs may become a valuable part of a comprehensive strategy to improve school performance for disadvantaged youth.

Due to the success of the program in improving academic achievement, elements from STEP have been incorporated into the educational component of the Labor Department's Summer Youth Employment Program.

California's Partnership Academies are small-scale, high intensity, "career academies" for students in grades ten through twelve who have low grades, poor attendance, and are seen as at risk of dropping out of school. In many academy models, students are also required to have standardized test scores no more than two years below grade level and a certain minimum level of motivation. Because of these requirements, the Academies probably do not serve the most troubled of the at-risk population. The schools are focused on such careers as electronics, health, computers, and finance, and include substantial input and mentoring from employers. If they meet certain academic and attendance requirements Academy students are also given summer internships in their career of interest.

An evaluation has estimated that the Academies cut the high school dropout rate for participants in half, from about 14% for a comparison group to about 7% for Academy students.[15] The study also found a number of statistically significant positive effects, including somewhat better attendance and higher grades for Academy participants. The effects of the program varied markedly among the academies studied, with a number of schools having no positive impacts at all. This suggests that local factors strongly affect the success of the model.

Other evaluation evidence on Academies comes from a recent Department of Education demonstration program which funded studies of California Partnership Academies at two sites.[16] One of these sites found results similar to those above -- the dropout rate was cut

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[14] Walker, Gary and Frances Vilella-Velez, Anatomy of a Demonstration: The Summer Training and Education Program from Pilot through Replication and Post-Program Impacts, Public/Private Ventures, 1992. This post-program study stated that STEP "had weak or non-existent reinforcement mechanisms to connect the summer experience to the school year, or to other key aspects of [the students] lives."

[15] Stern, David et. al., "Benefits and Costs of Dropout Prevention in a Program Combining Academic and Vocational Education: Third-Year Results From Replications of the California Peninsula Academies", Educational Evaluation and Policy Analysis 11(4), 1989.

[16] Hayward, Becky and G. Tallmadge, Evaluation of Dropout Prevention and Reentry Projects in Vocational Education, Draft Final Report, Research Triangle Institute, November, 1993. This draft report is not yet approved by the Education Department.

roughly in half by the second year of the evaluation. The second site found no effect of the program.

The small sample size and the comparison group design of these evaluations means that these encouraging results should be taken as only approximate. But it seems likely that the program had positive effects.

The Maryland's Tomorrow (MT) Program is of interest because it is a large-scale effort that combines an intensive summer program (including summer jobs) with a school year follow-up. MT is a statewide program. During 1992, it served some 8,000 students at risk of dropping out in 80 schools at a total cost of $9 million. Each program includes summer jobs for students, intensive academic instruction during the summer and the school year, career guidance and exploration, and counseling through adult mentors, peer support, or tutoring.

The first two cohorts of students entering the program have been tracked from 9th grade through high school graduation and compared to at-risk students in the same schools who entered ninth grade the year before the MT program was begun.[17] They were also compared to at-risk students in other Maryland schools which did not implement the MT program.[18]

Overall, MT was not successful in lowering the ultimate dropout rate for its first two cohorts of students. But there is evidence that the program succeeded in delaying when students drop out -- dropout rates of MT students were found to be lower than a comparison group of students during the 9th grade, but the rate increased to be equal to the comparison group by the end of the 12th grade.

There is evidence that MT was successful in improving academic outcomes for participants. Participation in MT appeared to increase student likelihood of passing all the Maryland Functional Tests (a basic skills tests) by the end of the 12th grade from about 60% to 85%.

It should be noted that the outcomes of the program appeared to improve somewhat from the first to the second cohort enrolled. It may be unrealistic to expect a program to show dramatic success with the very first students it enrolls. As MT staffers gain more experience, future program results could improve.

Employment Programs

The Department of Labor's Summer Youth Employment and Training Program (SYETP) provides minimum wage summer jobs and some remedial education to hundreds of thousands of disadvantaged young people aged 14 to 21.

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[17] Moody, Mark et. al. Evaluation of the Maryland's Tomorrow Program Cohort I and II, Maryland State Department of Education, April, 1994.

[18] White, Thomas et. al. Maryland's Tomorrow Evaluation: Year Four, Pelavin Associates, February, 1993.

Research indicates that SYETP is successful in greatly increasing the total summer job opportunities available to disadvantaged minority youth.[19] That is, public summer jobs do not simply attract youth who would have found other employment. Using data on minority employment and SYETP placements in various states, researchers estimate that for every 3 SYETP jobs provided, 2 youth are employed who would otherwise not have worked that summer.

Little is known about the effect of in-school employment on academic achievement or future employment success.[20] We do know, though, that subsidized work experience alone has not been particularly successful in improving the employability of out-of-school disadvantaged high school dropouts once the subsidized work had ended.

The Youth Incentive Entitlement Pilot Project (YIEPP) was a demonstration active from late 1978 to early 1981. It guaranteed full-time summer jobs and part-time school year jobs to disadvantaged youth provided that they stayed in school. Disadvantaged youth aged 16 through 19 who had not graduated from high school were eligible for the program. All the jobs offered were at the minimum wage. About one-fifth of youth hours under the program were at private sector for-profit firms, with the rest accounted for by public and non-profit employers. The largest category of private sector employers was retail trade.

Like Summer Youth Employment, YIEPP seems to have greatly increased the total job opportunities available to disadvantaged youth. The evaluation estimated that employment rates among 16-18 year old disadvantaged African-Americans at program sites increased dramatically compared to what they would have been without YIEPP.[21] School year employment doubled from about 20% to about 40%, while summer employment increased from about 35% to about 45%. These minority employment rates under YIEPP were equal to those of whites in the same areas.

This dramatic increase in employment is encouraging. It indicates -- as does the evidence from the Summer Youth Employment Program -- that disadvantaged youth want to work and do work once they are given the opportunity. Government programs can be successful in dramatically improving attachment to the workforce among poor youth, traditionally a group with extremely low levels of employment.

But the evaluation also found that YIEPP was unable to achieve one its major goals -- increasing school enrollment and success. Despite the school enrollment requirement attached to the jobs, researchers estimated that there was no significant improvement in school

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[19] Crane, Jon and David Ellwood, The Summer Youth Employment Program: Private Job Supplement or Substitute, Harvard University, March, 1984.

[20] There is some positive evidence from longitudinal studies of high school students who get jobs in their last two years of school. See Ruhm, Chris, Is High School Employment Consumption or Investment?, Draft, University of North Carolina, April, 1994.

[21] Farkas, George et. al., Post-Program Impacts of the Youth Incentive Entitlement Pilot Projects, Manpower Demonstration Research Corporation, 1984.

enrollment or high school graduation at program sites. It is uncertain whether the program was successful in improving long-term employability, and the existing evidence is not too positive.[22] There is also some evidence that the increased availability of jobs may have helped to reduce childbearing among low-income blacks in the experimental areas, but more research is needed in this area.[23]

It should be noted that the brief duration of the demonstration meant that many local programs were in operation for only two years. This may have limited long-term impacts of the program.

Programs for Out-of-School Youth

Skills Training Programs

Training programs for disadvantaged youth appear to be successful only when they are skillfully implemented or highly intensive. Most short-term training programs for youth have not produced positive labor market effects. Table 1, in the paper's appendix, summarizes results from some of the many evaluations of training programs for out of-school youth.

JTPA Title II and CETA

Important evidence in this area comes from evaluations of the Job Training Partnership Act (JTPA) and the Comprehensive Employment and Training Act (CETA). CETA was the major Federal job training initiative in the 1970s. In the peak year of 1979, CETA programs spent about $6 billion annually on public service jobs and training for youth 16 to 21 years old. The major studies of the program's effects agree that CETA youth trainees (both male and female) had no post-program earnings advantage over comparable non-trainees. [24] However, these CETA studies did not use random assignment, and their reliability has been questioned.

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[22] A small but significant earnings gain was found for the 6 months after the program ended, but the short length of the follow-up combined with questions about the quasi-experimental design left many doubts about the validity and likely duration of the effect.

[23] Olsen, Randall and George Farkas, "The Effect of Economic Opportunity and Family Background on Adolescent Cohabitation and Childbearing Among Low-Income Blacks", Journal of Labor Economics, 1990. Extensive differences between the comparison and treatment sites in the evaluation mean that this evidence is strong but not conclusive.

[24] Barnow, Burt, "The Impact of CETA Programs on Earnings", The Journal of Human Resources, Spring, 1987.

In 1982 JTPA Title II replaced CETA as the major government training program. In 1992, JTPA enrolled 125,000 out-of-school youth aged 16 to 21.[25] Slightly more than half of these were high school dropouts, and the vast majority were economically disadvantaged (under 125% of the poverty line).[26] The average length of time in the program for youth was 5 months, and an average of $2,800 was spent per youth enrollee.

Results were recently released from a major experimental evaluation of JTPA. Between 1987 and 1989, over 20,000 applicants to the program at 16 sites were randomly assigned to either a treatment group which could make use of JTPA services or a control group which could not (but which could make use of non-JTPA training services).[27] The post-program earnings of the treatment group were compared to those of the control group in order to determine the labor market impacts of JTPA.

The findings for the out-of-school youth component of the program were discouraging. JTPA produced no statistically significant positive effects for out-of-school youths, either male or female.[28] This finding held true over a two and a half year follow-up period, and for all the different service strategies that were used -- classroom training, OJT/job search assistance, or a mix of less intensive services. In addition, no reduction in youth crime rates or welfare receipt was found.

There were two exceptions to this generally bleak picture. One was a pattern of slowly increasing earnings gains for female youth recommended for classroom training. The gradual increase in earnings over time is a pattern that is expected for classroom training. During the year beginning 18 months after enrollment in JTPA, female youth referred to classroom training earned over $700 more than control group members, a difference that was nearly statistically significant. A second bright spot was the performance of one of the youth sites, which produced large earnings gains for enrollees that differed significantly from those found at other sites.

It is also important to understand that the control group in this study also received substantial amounts of education and training services. (Youth who enrolled in JTPA only received an average total of 127 to 182 more hours of services than the control group members they were compared to). In some cases this occurred because JTPA personnel referred control group members to other programs in the community. Naturally this reduces the difference between

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[25] U.S. Department of Labor, 1993. 110,000 in-school youth are also enrolled in JTPA each year, but the evaluation findings discussed here relate only to out-of-school youth.

[26] U.S. Department of Labor data.

[27] Bloom, Howard S. et. al. The National JTPA Study: Overview of Impacts, Benefits, and Costs of Title II-A, Abt Associates, February, 1994. The youth findings are discussed here and the adult findings in Section 3 below.

[28] The evaluation also provided some evidence, based on self-reported earnings, of a strong negative effect of program participation on the earnings of male youth with a previous arrest. However, an examination of actual UI earnings records did not support this finding. It is doubtful whether the negative impact finding is accurate.

the experimental and control group, and also reduces the expected impact. This limited "treatment" differential means that the evaluation would probably miss the kind of limited but positive impacts that might be expected to emerge from short-term classroom training.[29]

In part as a response to early results from this JTPA evaluation, Congress in 1992 enacted amendments to the program designed to increase the duration and intensity of youth training, as well as to correct other areas of weakness in the program. Since the evaluation discussed here examined the program's operation during 1987-89, the results do not reflect any of the 1992 program changes.

The Job Corps

A youth training program that uses a very different model than the rather inexpensive, fairly short-term one used in JTPA Title II is the Job Corps. The Job Corps is by far the most intensive Federal training provided to any civilian population. The severely disadvantaged nature of Job Corps students and the residential nature of the program make expenses of $21,000 per service year (or an average per-student cost of $15,000) necessary to implement the model.[30]

As of 1993, Job Corps enrolls about 62,000 new youth a year, with total outlays of approximately $970 million. The full Job Corps program usually takes about a year to complete. However, the difficulty of the training and the strict code of conduct enforced in Job Corps centers cause a substantial minority of enrollees to drop out or be dismissed within the first 3 months.

Job Corps youth are more disadvantaged than the out-of-school youth in JTPA Title II. Over 80% of Job Corps enrollees are high school dropouts, and about three-quarters have never worked before coming to the Corps.[31] Job Corps is a highly intensive, residential ("boarding-school" type) program that provides basic education, vocational skills, and a wide range of supportive services. Job placement services are also provided after completion of the program.

To examine the effectiveness of the Corps, a study of over 5,000 youth was completed in the early 1980s.[32] The earnings, educational achievement, criminal records, and welfare dependency of Job Corps enrollees were compared to the records of a demographically similar

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[29] Kane, Thomas, Reconciling Experimental and Non-Experimental Evidence on the Returns to Postsecondary Education, Kennedy School of Government, November, 1994.

[30] The divergence between the costs comes from the program's high dropout rates. Students who complete the program take about a year at a cost of $21,000, but the $15,000 average includes those students who drop out.

[31] House Ways and Means Committee, 1993 Green Book, United States Congress, Washington, D.C. 1993.

[32] Mallar, Charles et. al., Third Follow-Up Report of the Evaluation of the Economic Impact of the Job Corps Program, Mathematica Policy Research, 1982.

comparison group who had not enrolled in the Job Corps.[33] These experiences were tracked for a period of four full years after graduation.

The evaluation found that Job Corps participation significantly increased earnings and educational attainment, while reducing welfare dependency and the incidence of serious crime among graduates. Specific findings included:

> *Earnings increases.* Over the four years after graduating from the program, Corps enrollees earned on average over $1,300 more per year than comparison group members, a difference of 15%.
>
> *Increased educational achievement.* Although only about 5% of comparison group members attained high school diplomas or GEDs, over 25% of Corps enrollees did. By the end of the followup period, Corps enrollees were also twice as likely as non-enrollees to attend college.
>
> *Increased employment and declines in government benefit payments.* Corps participants were employed on average over 3 weeks more per year than comparison group members. They also required less government assistance, receiving an average of 2 fewer weeks of welfare benefits and 1 week less of unemployment insurance each year.
>
> *Declines in serious criminal offenses.* Although Job Corps enrollment did not affect the overall arrest rate, it did reduce the incidence of felony crime among participants.
>
> *Savings for society.* The intensive nature of the Job Corps program leads to high up-front costs, but the resulting benefits are estimated to substantially exceed the costs. When such benefits as the value of output produced at Job Corps centers, reduced government assistance, increased earnings, and reductions in serious crime are summed up, the study estimated that lifetime benefits to society from Job Corps training are about 45% greater than program costs.

The one major group that Job Corps was not found to significantly assist was disadvantaged single mothers. These women did not show significant earnings gains from Job Corps participation. However, women without children did benefit.

A natural question is whether the impacts of the Job Corps are still as positive today as they were when the participants in the study graduated the Job Corps in the late 1970s. There are several reasons for thinking that Job Corps' benefits are at least as great as they were when this study was completed:

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[33] This study did not randomly assign participants to a treatment (Job Corps) and control (non-Job Corps participant) group. However, efforts was made to match Job Corps and comparison groups carefully on demographic and geographic variables, and to control for both observed differences and unobservable motivational differences between the groups. Because of this, the evaluation is generally accepted as reliable evidence.

The basic performance indicators of the Job Corps program have not changed appreciably since the late 1970s. For example, in program year 1993 an estimated 59.5% of those exiting the program entered employment, and 10.5% entered further education, for a total positive outcome rate of 70%. In 1978, when many of the youth in the study left the program, the positive outcome rate was also about 70%, with 56% finding work and 15% continuing their education. This is a remarkable achievement given the decline in the overall economic fortunes of disadvantaged youth since the 1970s.

Job Corps costs per service year are roughly 10% lower today than they were when the study was conducted.

The program has undergone changes and improvements during its additional decade of experience.

In the end, though, a new study is the only way to determine the current impact of Job Corps with certainty. The Labor Department is currently conducting a new random assignment experimental study of the program, with preliminary results expected in 1998.

If nothing else, though, we can say that the Job Corps mission of providing a "second chance" to high school dropouts is more important than ever. The decline in the fortunes of Job Corps' target population over the period since the study was completed proves this. From 1978 to 1992, the employment rate among recent high school dropouts has declined from 50% to 36%. Those who are employed earn less. The real earnings of young high school dropouts who are employed full-time have dropped almost 25% since the late 1970s. And crime rates -- especially violent crime rates -- have increased among young people.

JOBSTART

Jobstart was an attempt to replicate the successes of the Job Corps in serving severely disadvantaged high school dropouts, but in a much less intensive, non-residential setting.[34] Although some of the techniques and curricula used in the program were similar to those used in Job Corps, the program was considerably less expensive. The average expenditure per program participant was about $5,900, which is more than the $2,800 per participant cost of JTPA youth programs but less than half the cost of Job Corps. On average, students spent just 60 hours per month in Jobstart training, considerably less than the residential Job Corps sites are able to provide.

The 13 Jobstart sites enrolled about 1,000 economically disadvantaged high school dropouts with low reading skills. This population is among the hardest to serve. It is comparable to Job Corps enrollees, and considerably more disadvantaged than JTPA youth enrollees. The

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[34] Cave, George, et. al., JOBSTART: Final Report on a Program For High School Dropouts, Manpower Demonstration Research Corporation, October, 1993. This document includes both a program description and evaluation results for all sites.

program provided a mixture of basic skills education, vocational training, some support services, and job search assistance after the end of the program. Average duration in the program was about 7 months.

The generally disappointing results from Jobstart indicate that it will be difficult to find a less intensive alternative to Job Corps which has substantial positive effects. Participants were tracked for a four-year period after enrollment in the program. When the results from all the sites are combined, there was no significant increase in overall employment rates or earnings for the total period or any individual year. Average earnings gains of over $400 (8%), which were close to statistically significant, were found during the third and fourth years of the follow-up. However, these gains are not nearly large enough to counterbalance the costs of training. The program also does not appear to have reduced welfare receipt.

The program did have a few successes, though. It raised the educational attainment of its enrollees somewhat, as measured by the receipt of GEDs and vocational licenses. Jobstart participation roughly doubled the chance of receiving such certifications, from about 15-20% for controls to roughly 35-40% for experimentals.[35] But these educational gains were not reflected in improvements in earnings or employment. (See the discussion of the limited economic impact of the GED in Section 4 below).

In addition, Jobstart showed some ambiguous evidence of success in reducing crime rates. The full sample showed a small but significant reduction in the probability of arrest during the first year of the program, when participants were actually enrolled in training while controls were not. During this initial year 10.1% of Jobstart participants were arrested, as opposed to 12.6% of the control group. But this effect rapidly faded out after they left the program. Over the full four year observation period the likelihood of arrest was essentially identical for both program participants and controls.

One key subgroup, men with an arrest prior to entry into the program, also showed some evidence of a positive employment effect. Earnings for these men were an average of almost $2,000 higher in the fourth year after program entry, and their probability of arrest appears to have dropped somewhat due to Jobstart.[36] Some 75% of men with a prior arrest in the control group were arrested again within the four year observation period, while about 69% of similar Jobstart participants were. This effect did not reach statistical significance, but this may be because the sample of men with a prior arrest was small.

But the most striking bright spot in the program's results was the remarkable performance of one of the program's 13 sites --the Center for Employment and Training (CET) in San Jose.

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[35] The bulk of this increase came through greater receipt of GEDs. Many researchers feel that GED receipt alone is not very helpful in the labor market -- see section 4 for a discussion of this issue.

[36] JOBSTART earnings impacts are presented in current year dollars, which could be any year from 1989 to 1992. The costs of the program are in 1993 dollars.

The CET Project

Founded in 1968, the CET provides 3-6 months of vocational training to disadvantaged youth and adults. CET's headquarters and largest site is in San Jose, but it currently operates training centers in 25 sites in three western states, with the majority in California. The program serves a fairly disadvantaged population; 65% of their 1991-1992 students were high schools dropouts, and over half were limited in their ability to speak English.[37] CET clients are mostly Hispanic.

The Jobstart study found that youth at the San Jose CET site showed sustained annual earnings gains of over $3,000. Combining earnings gains from the third and fourth years after entry into the program, young CET participants earned over $6,000 more than control group members, which was a 40% earnings increase. These are among the largest training effects ever recorded in a youth training program. When combined with CET's impressive performance in training minority single parents (see below), this program has an excellent record of achievement.

It is not known exactly how these results were achieved at CET. In terms of the length and cost of the program, CET was one of the shortest and cheapest of the Jobstart sites. Youth were enrolled for an average of 4.1 months and spent 335 hours in training. Total costs per enrollee were $4,200. However, the comparatively short stay in the program may have made CET a more intensive experience -- participants spent over 80 hours per month in training, well above average for all the Jobstart sites.

The basic element that sets CET apart from other training programs is its strong focus on employment, a focus which is integrated into every element of their program. CET is distinguished by[38]--

> *Close connections to the labor market.* CET staff have extensive knowledge of local labor markets, which they use to determine which technical skills will be taught in their courses. In each new community CET enters, an industrial advisory board is set up to assist in skill selection and curricular review. CET courses are taught by experienced technicians from industry. Many area employers are also on their board.
>
> The program also has a strong employment orientation, with an emphasis on job placement Program staff use their many employer connections to help place their students after training is completed.
>
> *Integrated basic education and vocational skills training, with an emphasis on the latter.* CET emphasizes job skills training over learning basic skills. The basic education provided is tightly connected to skills training. At entry trainees immediately begin vocational training designed to simulate a real job situation. If

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[37] 25th Anniversary Annual Report, Center for Employment Training, 1993.

[38] Personal communications with CET and Rockefeller Foundation staff.

trainees have difficulty with basic reading or math during this training, they are given individual assistance on the spot by basic skills tutors present during the training. Instead of being taught academic skills through classroom instruction, students learn them in the context of job training.

An individualized, open-entry open-exit program. The CET curriculum is tailored specifically to the needs of each individual student. Students are accepted on an open-entry basis, with no testing or other prerequisites for entry. This is similar to the Job Corps approach.

Highly experienced staff and extensive local knowledge. CET has been active in San Jose for over 25 years, and some of its staff have been working there for this entire period. Their long experience in the city has allowed the program to develop many contacts in the business community and earn an excellent reputation among employers. This reputation seems to help CET place its graduates.

CET training was successful not only in the Jobstart demonstration, but in a separate evaluation of its ability to train minority female single parents, another group with serious barriers to labor market success. CET training produced annual earnings gains of over $1,500 for these women.

The Department of Labor is currently funding a replication of the CET model in a number of East Coast cities. These new sites will be evaluated to determine if the success of CET can be reproduced in other cities.

Other Program Models

Subsidized employment has positive immediate effects, but by itself has not been successful in improving long-term earnings and employment for youth. This approach may prove more successful if combined with other services.

Many programs for disadvantaged youth provide temporary subsidized employment, both to improve their immediate employment status and in the hope that work experience alone -- even without skills training or extensive job placement assistance -- will make disadvantaged young people more employable in the future. The limited evaluation evidence that is available suggests that temporary employment programs without additional services bring little or no post-program benefits to disadvantaged youth. But they do improve employment and earnings during the program period, and there is also a bit of evidence that combining employment with other services can bring greater results.

The Supported Work demonstration is the most extensive and well-evaluated experiment testing the effect of work experience on future employment prospects for disadvantaged youth.[39] The demonstration provided up to a year of subsidized work experience followed by

job placement assistance. It enrolled disadvantaged high school dropouts, half of whom had previous criminal records. The work experience received was overwhelmingly in the public and non-profit sector, and it was often difficult to build bridges to private sector firms in order to place youth in jobs after the program was over.

Participants showed higher earnings than controls during the subsidized employment period, but after the employment was over their success in finding work was no greater than the control group. There was also no reduction in welfare receipt found for youth who had gone through Supported Work. Crime rates among Supported Work clients did not decline, even while they were employed in subsidized jobs. Overall, these findings indicate that public sector work experience alone did not help the future labor market prospects of disadvantaged youth.

Similar results were obtained by the Alternative Youth Employment Strategies Demonstration. This demonstration tested several alternative models of service delivery for disadvantaged youths referred by the juvenile justice system. The service options included 6 months of work experience, 6 months of classroom training, and a mixed model which combined work and training.

Overall, program participants showed significant gains (from 41% to 51%) in employment rates compared to controls 8 months after program exit. But those youth who received work experience alone did not have higher employment rates than controls.[40]

The model which mixed work and training did have a large and significant impact on employment, raising the likelihood of being employed from 41% to 62% for program participants 8 months after the end of the program. However, issues in the design of the evaluation, as well as the substantial number of sample members who were not located for the follow-up survey, mean that the promising results from this study are not definitive.[41] Further research testing this mixed approach would be a worthwhile investment.

Job placement and job search assistance programs have helped youth enrollees find jobs more quickly in some cases, but the evidence is mixed. In the late 1970s researchers tested the impact of job search assistance for out-of-school disadvantaged youth.[42] Two programs were

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[39] Summary and Findings of the National Supported Work Demonstration, Manpower Demonstration Research Corporation, 1980.

[40] Grossman, Jean Baldwin, The Evolution of Youth Employment and Training Programs, November, 1992, Public/Private Ventures. Her conclusions are based on a reanalysis of the data in the original report by Sadd, S., et. al., Alternative Youth Employment Strategies Project: Final Report., Vera Institute of Justice, New York, N.Y., 1983.

[41] The study used random assignment, but participants self-slected into different treatment strategies. This means the outcome differences between the service strategies may be partially due to self-selection. The response rate to the 8-month follow-up was 58% for controls, 69% for participants.

[42] Public/Private Ventures, Longer-Term Impacts of Pre-Employment Services on the Employment and Earnings of Disadvantaged Youth, May, 1983. Betsey, et. al. Youth Employment and Training Programs: The YEDPA Years, National Academy Press, 1985.

evaluated using a comparison group design, Boston's Jobs For Youth program and the 70001, Ltd. program. Both created significant earnings gains of over $1,000 annually during about the first year after intake into the program. These programs were unusually intensive for job placement programs. They included extensive counseling and up to 40 hours of job readiness classes, and in some cases provided follow-up services after youth were placed in their first jobs.

Applying the Lessons -- The Case of School-To-Work

The lessons learned from program evaluation are useful not only in judging existing programs, but in the design of new ones. A good example is the case of the recently enacted School to Work Opportunities Act. This legislation addresses the increasingly poor job prospects of high school graduates who do not go on to college by helping states and localities create programs which assist students in completing high school and making a transition to a good first job. Lessons from existing programs have helped to inform the initiative.

A range of programs for at-risk youth and high school dropouts have demonstrated the importance of contextual learning in student achievement. Many academic programs teach skills in the abstract, without linking them to specific job skills. The contextual learning approach emphasizes learning academic skills in a "real-world" context that directly prepares students for work. Both the Job Corps and (especially) the San Jose CET project use this approach, and both have been successful in working with young dropouts. Career academies for students at risk of dropping out have brought this model directly into high schools by teaching academic skills using a career-centered curriculum. Research has found some success in improving dropout rates.

The contextual learning approach has been incorporated into the Administration's program. School-to-work builds linkages that connect academic skills to the real world of work. Students in these programs will be able to immediately practice the skills they learn in school in the hands-on context of work.

The success of community colleges in raising the earnings and improving the vocational skills of their students also has important implications for helping high school graduates. Several of the most promising school-to-work approaches build bridges between community colleges, high schools, and local businesses to help students with technical education and the transition to work. These programs provide training to high school students, and also encourage them to continue their education in community college after high school graduation.

These successful job placement services accelerated the process of finding a job, but they didn't produce lasting gains in employment or earnings. One to two years after entering the program the participants' earnings were not significantly different from those of similar youth who hadn't participated.

The experiences with the programs above were positive, but job search assistance for youth provided by the JTPA program has not had good results. JTPA youth recommended for a combination of job search assistance and on-the-job training did not show significant earnings gains as a result. Furthermore, the comparison group design of the earlier studies on job search assistance for youth casts some doubt on their findings.

Programs for Young Single Parents

Several demonstration programs have attempted to address the needs of young (16 to 21 year old) single parents and help them to complete their education. The evidence indicates that training programs can be effective for this population, but effects are modest and not all programs have been successful. Programs that include strict mandates for participation have had the most success in improving outcomes for these young women, while voluntary interventions targeted at the most troubled teen mothers (those who had already left school and remained out for long periods) have had the least success. But the overall level of poverty and welfare receipt is high even after participation in successful assistance programs.

Evidence from the Teenage Parent Demonstration indicates that a requirement for teenage mothers on welfare to participate in education, training, or employment can produce positive outcomes. The long-term effects of the program are still unknown, however. The Teenage Parent Demonstration operated on a large-scale and required all teen parents entering the AFDC program in the demonstration sites to enroll in school, job training, or find a job.[43] Those who did not participate were sanctioned by reducing the AFDC grant by the amount normally allocated to the needs of the mother (about $160 monthly in the demonstration sites) until they agreed to participate. Case management and support services were provided to participating mothers.

The program achieved very high participation rates (over 95%) and was successful in getting teenage mothers into school or employment. Two years after entering the program 79% of the program participants were in school, job training, or employment as compared to 66% of a control group of teenage mothers receiving AFDC who had not been required to participate in the Teen Parent Demonstration. Program participants showed a statistically significant $300 increase in annual earnings and a similar reduction in the average amount of AFDC benefits

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[43] Maynard, Rebecca, ed. Building Self-Sufficiency Among Welfare-Dependent Teen Parents: Lessons from the Teenage Parent Demonstration. Mathematica Policy Research, 1993.

received. There was no change in poverty; 85% of both participant and control groups were poor.

This demonstration encouraged teen parents to further their education as well as to seek employment. The two-year follow-up period was not long enough to assess the full positive impacts of these efforts. Future studies will examine the participants to see if labor market impacts grow more positive after school is completed.

Ohio's Learning, Earning and Parenting (LEAP) program is a mandatory program that uses welfare grant reductions, bonus payments and case management to enforce its requirements to increase the school enrollment and attendance of single parents. The program reduces the basic AFDC grant of teenage single mothers who do not attend either high school or an adult basic education program. The AFDC grant of mothers who do attend is increased. Case managers work closely with LEAP teens to monitor school attendance and help them with problems that arise.

LEAP appeared to have a positive but moderate overall impact.[44] The best results were found for younger teen mothers, especially those who were initially in school at the time LEAP was begun. Statewide results show that during the first year of the program, the likelihood of full-year high school enrollment for teen mothers who were in school when the program started was increased from 47% for controls to 56% among experimentals. Among teen mothers who had already dropped out of high school, 10% of the LEAP experimentals re-enrolled and completed a year, while 5% of the controls did.[45] All of these differences were statistically significant. A small but positive impact on enrollment in non-high school adult education was also found. LEAP was most effective for teens who were under 18.

Three-year impacts are available for the city of Cleveland only.[46] They show a significant positive impact on high school completion for teens who were in school when LEAP started. Among these single parents, 24% of the LEAP group and only 18% of the control group had graduated from high school after three years. The likelihood of getting a GED for these youth also increased from 2.3% to 5.6%. In contrast, there were only small and insignificant positive impacts on high school and GED completion for teens who had already dropped out when they enrolled in LEAP.

Project Redirection has provided some evidence that suggests that intensive support services and mentoring for young single mothers on welfare can have modest positive impacts on their

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[44] See Bloom, Daniel et. al., LEAP: Interim Findings on a Welfare Initiative to Improve School Attendance Among Teen Parents, Manpower Demonstration Research Corporation, New York, N.Y., May, 1993. This is a random assignment evaluation with a large sample size.

[45] LEAP students enrolled in school attended at rates similar to control group students who were enrolled. Thus, the greater school enrollment for the LEAP sample also translated to greater total attendance.

[46] See Long, David et. al., LEAP: The Educational Effects of LEAP and Enhanced Services in Cleveland, Manpower Demonstration Research Corporation, New York, N.Y., October, 1994. This is a random assignment evaluation with a large sample size.

eventual employment outcomes and the well-being of their children. Project Redirection provided integrated educational, health, and welfare services to disadvantaged young (17 and under) single mothers.[47] The single mothers were also paired with a mentor from the community. Some 40% of program participants were still attending high school at entry into the program.

This evaluation did not use a randomly assigned control group, so effects should be viewed as only approximate. Five years after entry into the program participants showed no educational advantages over a comparison group. However, they were moderately more likely to be employed (16 weeks for project participants as opposed to 11 weeks for comparison group members). They were also somewhat less likely to be on AFDC. Their children were substantially more likely to be enrolled in Head Start. These results are positive but modest, and the overall levels of employment are still disappointing.

The New Chance demonstration was a voluntary program which enrolled 2,300 women at 16 sites, and provided 20 to 30 hours per week of basic education, job skills training, GED classes, and in some cases work internships.[48] Clients could remain in the program for up to 18 months. New Chance participants were highly disadvantaged teen mothers, and 95% were high school dropouts. Most were in their late teens, and the average client had left high school an average of two and a half years before entering the program. These women were a somewhat more disadvantaged population than the teen mothers enrolled in the other programs discussed here.

Eighteen months after entry into the New Chance program, impacts were almost uniformly negative. There was a significant increase in the receipt of the GED, but this was not accompanied by improvement in any literacy test scores. There were no improvements in employment or welfare receipt. (These outcomes may improve with time -- a number of New Chance participants were either still participating in some form of education or had recently been in school.)

Residential Location and Youth Outcomes

A recent study of a Chicago housing program allows us to examine the impact of residence on education and employment outcomes for youth.[49] Although this program did not directly

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[47] Polit, Denise, et. al. The Challenge of Serving Teenage Mothers: Lessons From Project Redirection, Manpower Demonstration Research Corporation, October, 1988.

[48] Quint, Janet, et. al. New Chance: Interim Findings on a Comprehensive Program for Young Mothers and Their Children, Manpower Demonstration Research Corporation, June, 1994.

[49] Rosenbaum, James, "Black Pioneers -- Do Their Moves To the Suburbs Increase Economic Opportunity for Mothers and Children?", Housing Policy Debate, June, 1993.

provide training or education, it appears to have produced substantial improvements in the education and employment of disadvantaged youth.

As part of a court settlement on desegregation (the "Gautreaux" case), the city of Chicago was required to provide housing vouchers that allowed poor black families from inner-city Chicago to move to white middle class suburban areas if they so chose. The program has been granting such vouchers since about 1980.

A group of researchers decided to test the impact of this move on the educational and employment outcomes of children in these families. The researchers hypothesized that moving out of racially segregated, extremely poor central city neighborhoods to majority white, middle class, suburban areas might have a strong impact on the educational fortunes of these young people.

In order to determine the impact of moving to the suburbs, the researchers compared two groups of families which had received Gautreaux housing vouchers. One group had been given vouchers which permitted them to move to mostly black, urban neighborhoods. Another group had been assigned vouchers for housing in the majority white, middle class suburban areas surrounding Chicago. The vast majority (close to 90%) of the families in both samples were single-parent families receiving AFDC. The groups were compared 7 to 13 years after moving to their new homes, when their children had reached the age of 18. One hundred families were compared, 60 in the suburbs and 40 in the city.
Impacts of the move to the suburbs appeared to be very positive:

> Only 5% of the youth in the suburban families dropped out of high school, as compared to 20% of those in urban families.
>
> More than half of suburban youth were attending college, as opposed to just 20% of urban youth.
>
> Three quarters of suburban youth were employed, while 40% of urban young people were. Suburban youth also received higher wages -- 21% of them earned more than $6.50 per hour, while just 6% of urban youth did.
>
> The employment level of the parents in the suburban families improved as well. About three-quarters of suburban parents were employed, as opposed to 65% of the city parents.[50]

Despite the small sample size, almost all of these impacts were statistically significant (the only one that wasn't was the increase in the employment of the parents). This suggests that residence did have a substantial impact on achievement.

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[50] The sample size for this comparison was larger than the 100 families used to compare youth outcomes. 224 suburban parents were compared to 108 urban ones.

The research also interviewed the children and their parents to determine some of the reasons for the many benefits that seemed to result from moving to the suburbs. They found that the major reasons appeared to be better school quality, increased job availability, and improved physical safety. The physical safety factor is often not considered in discussions of employment for the disadvantaged, but the families in this experiment reported that the lack of physical safety in the city was demoralizing and interfered with the possibility of taking work.

There are two methodological issues associated with the Gautreaux study. The first is that the samples were not randomly assigned to treatment and control groups. However, it seems that the selection process should mimic random assignment fairly closely. Families were assigned apartments in the suburbs or the city based on which locations happened to be available at the time they reach the top of the wait list. Clients could refuse apartment offers but few did so since it can be a long wait for another offer. The characteristics of suburban and urban movers (including the parents' AFDC receipt, education and employment) were very similar before they moved. However, it is still possible that the samples differed in unobservable ways.

A second issue is that evaluators were not able to determine the rate of attrition from the program. The final sample they analyzed may therefore be biased in unpredictable ways -- either downwards or upwards -- due to differential dropout from the comparison and treatment groups. This may bias the results somewhat, but the magnitude of the youth impacts are so great that they should still be sizable after any reasonable estimate of attrition.

SECTION 3: PROGRAMS FOR DISADVANTAGED ADULTS

In addition to the youth training system for new entrants to the labor market and the re-employment system for displaced workers, there is a set of programs for economically disadvantaged adults with only a sketchy work history. These adults are not only unemployed and economically disadvantaged, but generally lack eligibility for unemployment insurance benefits and training programs for displaced workers due to their lack of work experience.[51]

Training programs for disadvantaged adults have often been successful in improving earnings significantly. Well-implemented adult training programs appear to be cost-effective investments for society. However, training programs alone are often not sufficient to lift disadvantaged participants out of poverty. This is especially true for single mothers. Education and training is only a part -- though an important part -- of a complete anti-poverty strategy.

Disadvantaged Adults Generally

Comprehensive Employment and Training Act (CETA) Training for Adults

A wide variety of Federally funded employment and training programs were active over the two decades prior to the passage of the Job Training Partnership Act in 1982. The largest was the Comprehensive Employment and Training Act, enacted in 1973. The employment services provided under CETA included public service employment, subsidized on-the-job training for the disadvantaged, classroom training, and subsidized work experience for very disadvantaged clients.[52] At its peak in 1979, CETA served 3.8 million individuals (both adults and youth), at a total cost of $18.4 billion. Roughly $12.5 billion of this spending funded training and public service employment for adults over 21.

There is some consensus among the major CETA studies on the post-program impacts of CETA public employment and training:[53]

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[51] For example, 85% of adult enrollees in Title II of the Job Training Partnership Act are ineligible for unemployment insurance due to lack of significant work history or the manner of separation from their previous job.

[52] The work experience element of the program differed from public service employment (PSE) and on-the-job training (OJT) in that it was targeted toward the most disadvantaged CETA clients as a form of training in the basics of the work world. PSE was not a training program, but was instead intended as direct job creation for the cyclically unemployed, while OJT was supposed to focus on skill development.

[53] These studies are reviewed in Barnow, Burt. "The Impact of CETA Programs on Earnings", The Journal of Human Resources, Spring, 1987.

- *Positive impacts were found for adult women trainees.* During the first year after exit from the program, adult women were estimated to earn roughly $800 to $1,500 more in annual income than they would have without CETA participation.

- *Evidence for adult men was ambiguous.* For methodological reasons there are many doubts about the accuracy of CETA findings on male earnings.[54] Some studies did estimate significant positive impacts for adult males participating in the on-the-job training component of the program, but there were no significant earnings gains found for other components.

It should be noted that CETA evaluation studies used methodologies that are not as reliable as experimental designs that have been used in more recent studies.[55] For this reason, the results above should be treated as only approximate. Results for men are especially sensitive to assumptions used in econometric modeling.

Job Training Partnership Act (JTPA) Title II Training for Adults

The passage of JTPA in 1983 marked a shift in the training strategy of the Federal government. Unlike CETA, JTPA has no provision for adult public service employment and de-emphasizes work experience in favor of on-the-job training. It is also funded at a much lower level and serves fewer clients. In 1993 JTPA Title II, the section of JTPA that serves the disadvantaged, enrolled about 550,000 new participants (310,000 of whom were adults) at a cost of $1.7 billion.

Ninety percent of JTPA Title II participants must be economically disadvantaged, which is defined as having a family income (exclusive of AFDC or Food Stamp payments) that is below roughly 125% of the poverty line over the 6 months prior to program entry. Some 30% of adult JTPA trainees have not yet achieved their high school diploma, and 28% are AFDC recipients. As of 1993, the average JTPA adult trainee stays in the program for 4 months, and total training costs per adult are about $3,300.[56]

The most common primary services received by JTPA adult trainees are classroom training (46% of enrollees), job search assistance (19% of enrollees), and on-the-job training (18% of

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[54] Ashenfelter, Orley and David Card, "Using the Longitudinal Structure of Earnings to Estimate the Effect of Training Programs", Review of Economics and Statistics, 1985. This article analyzed CETA data using a variety of different assumptions and model specifications. The findings of gains for women are robust across models, while findings for men vary greatly depending on the model used. The authors conclude that it is impossible to accurately determine CETA's impacts on male eearnings.

[55] See Fraker, Thomas and Rebecca Maynard, "Evaluating Comparison Group Designs With Employment-Related Programs", The Journal of Human Resources, Spring, 1987; Ashenfelter, Orley and David Card, "Using the Longitudinal Structure of Earnings to Estimate the Effect of Training Programs", Review of Economics and Statistics, 1985, 67(4):648-60.

[56] U.S. Department of Labor, Employment and Training Administration, December, 1993.

trainees).[57] On the job training (OJT) consists of subsidized training that takes place as part of a paying job, generally in the private sector. JTPA pays half of the wage for up to six months, but the job is supposed to be permanent. Classroom training includes both occupational skills training in fields like clerical, food service, electronics, or home health care, as well as training in basic academic skills.

The major evaluation of JTPA, discussed in Section 2 above, examined the effects of the program on both youth and adults.[58] The rigorous experimental design and the large sample sizes used in the study make its findings quite reliable.

The results of this study for adults are positive:

- *Higher earnings were found for adult men and women.* Adult males and females who enrolled in JTPA had significantly higher earnings than those who did not.[59] During the second year after leaving JTPA training, adult women who participated in JTPA had earnings an average of 15% higher than the non-JTPA control group, while adult males had earnings that were 10% higher. In dollar terms, this translated to annual earnings gains of over $900 for both male and female adults.

- *These earnings gains were still growing at the end of the thirty-month evaluation period.* Earnings of JTPA participants were observed for a period of 30 months after program enrollment. But earnings gains grew steadily throughout this observation period, especially for the adult male portion of the population. This gives reason to suspect that the earnings gains of adult male JTPA participants would be larger if more than a 30-month period were examined.[60]

- *On-the-job training and job search assistance (OJT/JSA) seemed particularly effective.* Adults designated for either on-the-job training or job search assistance showed annual earnings gains of over $1,000 by the final year of the study.[61] This represented gains of 13% for men and 17% for women.

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[57] These are breakdowns of the primary services received. Being assigned to a primary service strategy does not preclude receiving other services as a supplement.

[58] Bloom, Howard S. et. al. The National JTPA Study: Overview of Impacts, Benefits, and Costs of Title II-A, Abt Associates, February, 1994.

[59] The results are more robust for women than for men.

[60] Five-year follow-up results are due in 1996. These will show whether JTPA earnings impacts continued to grow.

[61] Not all adults recommended for these services actually received them. For example, 52% of adult JTPA enrollees recommended for OJT/JSA received OJT, 35% received JSA, and 27% received other services. These categories are not mutually exclusive.

- *Gains were especially large for AFDC recipients recommended for on-the-job training.*[62] Single parents receiving Aid to Families with Dependent Children (AFDC) who were recommended for OJT showed earnings gains of about $2,000 annually.

- *Welfare receipt did not decline due to earnings gains.* Despite the generally positive impacts of the program, welfare receipt did not significantly decline.

- *Most earnings gains resulted from increased hours of work, not increases in wage rates.* Four-fifths of the earnings gains for women and three-fifths of the earnings gains for men resulted from increases in hours worked, not wages.

- *The program was cost-effective.* The total additional earnings for the participants were about 50% greater than the total additional training costs expended on that group compared to the control group. These gains were realized within 2 1/2 years after program enrollment, and would have been greater if a longer horizon were examined.

The random assignment nature of the study and the large sample size makes its findings fairly trustworthy. However, there are a few caveats that should be kept in mind:

- The study measures only the incremental benefits of JTPA. The study is not designed to measure the earnings impact of all education and training programs available to control and experimental groups, but only the additional impacts of JTPA training services beyond those available outside of JTPA. This means that members of the control group are free to use education and training services from non-JTPA programs, and over 30% of the entire control group did receive such services.[63] Thus, the earnings impacts reported in the study represent only the incremental earnings effect of JTPA, not the total benefits accruing to the disadvantaged due to training services.

- The JTPA program has changed since the period when the study was implemented. The evaluation took place before the JTPA amendments of 1992. These amendments increased the targeting requirements and improved program coordination. The evaluation results do not reflect the effects of these amendments.

- Doubts have been raised about how representative the study is of JTPA on a national level. The 16 study sites were chosen more on the basis of their interest in participating than on how well they represent the overall JTPA program. However, the sites are diverse geographically and ethnically, and their program data are very close to the national JTPA average.[64]

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[62] Orr, Larry, et. al. Impacts, Costs, and Benefits of Title II-A, Abt Associates, 1994, forthcoming.

[63] The National JTPA Study: Draft Overview of the Final Report, Abt Associates, 1993. It should be noted that at the time individuals were assigned to the control group they were informed of alternative, non-JTPA training programs that they could use. This means that this control group may have been greater users of non-JTPA training services than a purely random group of JTPA applicants.

Single Parents -- Welfare to Work

Single parents face special barriers in the labor market. Because of the responsibilities of child care, they often need supportive services such as day care in order to work. Many disadvantaged single parents receive AFDC benefits, which can influence the incentive to take a low-wage job.

The earnings prospects of AFDC clients are often quite poor. The median income of all female single parents in 1992 was only about $12,000, and 35% of all female-headed families lived in poverty in that year.[65] AFDC clients are even more disadvantaged than the typical single mother because of their low level of skills. The best estimates are that about half of 25-year old AFDC recipients in a given year do not have a high school degree.

Such low education translates to low expected earnings even if AFDC recipients do work. These low expected earnings should be kept in mind during the discussion below. Even when programs for disadvantaged single parents succeed by producing earnings gains, these gains have rarely sufficed to lift many participants out of poverty.[66] Table I shows average post-program earnings of graduates from some of the more successful training programs of the last decade. Although their earnings were an improvement on what they would have obtained without training, they still fell short of the poverty line.

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[64] Bloom, Howard, "The National JTPA Study: Origins, Objectives, and Issues of Interpretation", Evaluation Forum, Issue 9, Summer, 1993.

[65] U.S. Department of Commerce, Bureau of The Census, Current Population Reports, Series P60-184 and Series P60-185.

[66] The addition of newly expanded EITC benefits will improve this situation a bit, although as Table 1 shows the problem will remain. By 1996 the EITC will add up to an additional $4 to every $10 earned by very low-income single mothers, an addition which will make it easier for training programs to raise single-parent families above poverty.

Table 1: Post-Program Earnings of Adult Female Participants In Selected Training Programs

Program	Annual Earnings	After-Tax Income Based on 1996 EITC Rules		After-Tax Income As % of 1993 Poverty Line	
		1 Child	2 Child	1 Child	2 Child
San Jose CET	$7, 080	$8,940	$9,370	92%	81%
JTPA (OJT/JSA)	$7,450	$9,330	$9,870	96%	86%
Home Health Care Demos					
Kentucky	$8,310	$10,500	$11,000	108%	95%
Texas	$7,060	$8,920	$9,340	92%	81%
New Jersey	$6,590	$8,330	$8,730	86%	76%

Earnings are annual earnings of female program participants in 1993 dollars, or the closest approximation to them that was available. Earnings represent annual earnings for roughly the second year after program completion.

SOURCES: Bell, Stephen and Larry Orr, "Is Subsidized Employment Cost-Effective for Welfare Recipients?" Journal of Human Resources, Winter, 1994; Bloom, Howard et. al. The National JTPA Study: Overview of Impacts, Benefits, and Costs, Abt Associates, February, 1994; Mathematica Policy Research, Fifth-Year Employment Impacts at CET, 1993.

Voluntary Programs

A number of programs have offered disadvantaged single parents the chance to enter some form of job training voluntarily. Among these is the JTPA program, which enrolls a substantial number of single parents and AFDC recipients. Such clients make up almost 40% of adult female JTPA recipients.

The voluntary programs which have produced the largest earnings gains for single parents have used subsidized employment. In subsidized employment and "supported work" models, clients are provided with up to one year of paid work experience in a productive job.

Two major social experiments -- the Supported Work Demonstration and the Home Health Aide Demonstrations -- provided about a year of subsidized employment to single parents who were long-term welfare recipients. The Supported Work demonstration, which took place in the late 1970s, included extensive support services, and was quite expensive. The Home Health Aide demonstrations of the mid-1980s placed their clients for a year of supported work with private home health aide agencies, and also provided some support services and classroom training in work skills to prepare clients for their new jobs. Support services provided in the Home Health Aide experiment were less intensive than those in the Supported Work program, and the program was only about half the cost of Supported Work. Experimental evaluations of these demonstrations have produced encouraging findings:

- *Both programs produced initial earnings gains averaging about $1,500 to $2,000 annually.* A year and a half to two years after exit from subsidized employment, participants in the Supported Work demonstration were earning on average about $1,700 more annually than control group members did, and received about $500 less in welfare.[67] The Home Health Aide demonstrations produced significant earnings gains for participants in 5 out of 7 states in which they were carried out. During the first and second years after program exit these gains averaged about $2,000 annually.[68]

- *Some gains are sustained over many years.* A recent re-analysis of the earnings of participants in the Supported Work demonstration tracked the earnings of program participants for 8 years after exit from the program.[69] The study found that during the 6th through the 8th year after graduation annual earnings were an average of $900 higher than they would have been without program participation. Sustained gains were also found for participants in the Home Health Aide demonstrations, who on average earned an additional $500 annually during the fourth to fifth years after exit from the program.[70]

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[67] Gueron, Judith and Edward Pauly, From Welfare to Work, Russell Sage Foundation, 1991. Table 5.1.

[68] Bell, Stephen and Larry Orr, "Is Subsidized Employment Cost-Effective for Welfare Recipients?" Journal of Human Resources, Winter, 1994.

[69] Couch, Kenneth, "New Evidence on the Long-Term Effects of Employment Training Programs", Journal of Labor Economics, 1992.

- *Both programs marginally reduced welfare receipt, but overall receipt was still high.* Three years after entry into Supported Work, 64% of participants were still receiving at least some welfare payments, while 71% of the control group were. Six out of the seven states in the Health demonstration showed significant welfare reductions during at least one year of the demonstration. Participants in four out of seven states reduced welfare receipt during both the post-program years examined. Reductions in average annual welfare receipt ranged from about $500 to $1,000.

- *The programs were cost-effective.* The Supported Work program produced benefits of at least 1.5 times the cost, and the Home Health Aide demonstrations produced social benefits in 6 out of the 7 states in which they were carried out.[71]

At the same time, however, the limits to these interventions are worth mentioning. The programs did not show much success in reducing the overall poverty rate among participants. In part, this was because reductions in welfare benefits accompanied increased earnings. But it was also because the average base earnings for this population are so low.

There is also substantial evidence that on-the-job training (OJT), a less intensive form of subsidized employment than that used in the above demonstrations, produces benefits for welfare mothers. As noted, OJT produced strong earnings gains of almost $2,000 annually for single-parent welfare recipients in the JTPA evaluation. In addition, OJT programs for AFDC recipients in Maine and New Jersey produced significant increases in annual earnings.[72]

Subsidized employment approaches are distinguished from simple workfare -- an approach which has not had much success in improving employability among welfare recipients -- by an emphasis on developing real job skills, the provision of support services, and subsidized jobs that closely simulate the experience of working in unsubsidized private sector environment.

Another program that tested voluntary training services for single parents was the Minority Female Single Parent Demonstration. This demonstration offered job skills training, basic education, and supportive services to about 4,000 minority single parents at four sites. Two thirds of the enrollees were welfare clients.

Only one site out of the four produced consistently positive results. This was the San Jose Center for Employment and Training. The nature of the CET program, which integrates basic skills training into a vocational skills curriculum, was described in the youth section above. Women enrolled in this training had average annual earnings gains of over $1,500 during the second year after program exit. These gains were sustained -- during the fifth year after entry

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[70] Unpublished analysis by economists Stephen Bell, Larry Orr, Glen Cain, and John Blomquist of Abt Associates. A five-year period was examined here.

[71] Bell, Stephen and Larry Orr, op cit.

[72] Gueron, Judith and Edward Pauly, From Welfare to Work, Russell Sage Foundation, 1991.

into the program CET graduates were still earning an average of $1,000, or 16%, more than control group members.[73]

The other three demonstration sites were not as successful as CET in raising earnings. While some earnings gains were found, they were too small to be statistically significant. The other sites had a training curriculum which placed less emphasis on vocational skills than CET's did, and evaluators felt that this was one reason for the difference in success.

Welfare to Work -- WIN and JOBS programs

Over the past 20 years many states and localities have operated programs that provided job search, basic education, and support services to help AFDC recipients move from welfare to work. Participation in these programs was often mandated for AFDC participants considered to be ready for work.[74] This mandatory quality distinguishes them from the voluntary welfare to work programs discussed above.

During the early 1980s under the Work Incentive (WIN) program, some states provided mostly job search and unpaid work experience. The Family Support Act of 1988 expanded the welfare-to-work effort and created the JOBS program. Under JOBS basic education and training have been made available to some recipients along with extensive job search assistance. JOBS has also increased Federal funding for supportive services to those leaving welfare for work.

The effectiveness of these programs in raising earnings and reducing welfare reliance among the eligible population has been rigorously evaluated using large samples and random assignment experiments.[75] In general, these programs have achieved modest but significant positive impacts for participants. The impacts are generally smaller than those found in successful voluntary programs. This is probably due to a combination of differences in the characteristics of participants (participants in mandatory welfare to work programs may be less motivated) and the less intensive services (mostly job search) that have been provided in JOBS-type programs.

The general conclusions that can be drawn from these evaluations are:

The programs usually produce modest earnings gains. Many programs -- the Baltimore Options program and the San Diego SWIM program during the mid 1980s, and later JOBS programs like the GAIN program in California and Florida's Project Independence -- have been

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[73] Fifth-Year Employment Impacts at CET, Mathematica Policy Research, 1993.

[74] Despite the fact that they were mandated, these programs typically affected only a minority of the AFDC population in a state or locality. This was partially because the programs had many exemptions to their mandates, and partially because of lack of funding and difficulties with implementation.

[75] The JTPA Title II evaluation results are also relevant here, since some JOBS training takes place in the JTPA program. As noted above, JTPA training was especially successful for AFDC women.

found to produce modest but significant gains in earnings and employment for participants.[76] These moderate gains have been found for many populations of AFDC recipients -- long-term welfare recipients as well as those who had just entered the rolls, single mothers in their early 20s as well as older welfare recipients.

Average earnings increases have usually ranged from about $300 to $700 per year for the entire population of eligible clients, even though only about half to two-thirds of program eligibles generally receive services.[77] Some sites have been more successful. For example, participants in the Riverside County program in California increased their average annual earnings by over $1,000, or 40%. These gains are mainly due to increases in employment, not to a rise in wage rates.

Longer-term studies have found that these gains generally "fade out" after about five years.[78] This seems to indicate that the main effects of the programs are in speeding up a return to work that would eventually have occurred even without intervention.

AFDC receipt also tends to decline somewhat. Participation in San Diego's SWIM program resulted in an average annual reduction of about $500 to $600 per year during the first three years after program enrollment. The GAIN program created an average drop in AFDC payments received of about $350 annually in the three years after program entry. These declines were statistically significant.

Welfare-to-work programs are often cost-effective. The SWIM program, for example, produced savings to government in reduced AFDC benefits and increased tax payments which totaled more than twice program costs. California's GAIN program produced mixed results -- programs in three of the six counties examined produced savings to government and society, while the other three counties did not. This finding applies to the first three years after program entry.

But overall levels of poverty, welfare receipt, and unemployment remain high even after participation in welfare to work programs. For example, three years after entry into California's GAIN program, 80% of those who had participated had annual incomes below the

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[76] Riccio, James et. al. GAIN: Benefits, Costs and Three-Year Impacts of A Welfare to Work Program, Manpower Demonstration Research Corporation, 1994. Kemple, James J. and Joshua Haimson, Florida's Project Independence: Program Implementation and First-Year Impacts, Manpower Demonstration Research Corporation, 1993. Friedlander, Daniel and Gayle Hamilton, SWIM: A Five-Year Follow-Up Study, Manpower Demonstration Research Corporation, 1993. Gueron, Judith and Edward Pauly, From Welfare to Work, Russell Sage Foundation, 1991.

[77] Those who do not receive services may also be affected by the program, though. Eligible clients may be motivated to get off welfare in order to avoid complying with mandatory welfare-to-work requirements. Also, some eligible persons don't receive services because they find work before entering the program. These persons may not need program services.

[78] Friedlander and Hamilton, op. cit., Friedlander and Burtless, forthcoming, Russell Sage Foundation. The one program that was found to have effects lasting 5 years or beyond was the Baltimore Options program. Long-term results from some other programs are not yet available though.

poverty line.[79] This was quite close to the 83% poverty rate among the control group. Just 40% of GAIN participants worked at all during the third year after program entry -- significantly higher than the 34% of the control group who were working, but still a minority of clients.

Even in the Riverside County GAIN program, generally considered to be one of the most successful welfare-to-work efforts ever evaluated, only 23% of the participants were still employed and off AFDC at the end of the third year after entry into the program. This was significantly more than the 18.4% of the control group who achieved this outcome, but it is a sobering reminder of the difficulty of helping recipients off AFDC and into jobs over an extended period of time.[80]

So far, programs oriented toward rapid job placement have shown better employment results than programs that focus on classroom education alone. But further follow-up evidence may change this story. Programs that emphasize placement into work and the immediate development of job-relevant skills seem to have had more success than programs that place a high priority on classroom basic education.

An example of such a work-oriented program is the Riverside County GAIN program. This program does provide adult education, but emphasizes the importance of taking any job available. This was the most successful of the California welfare-to-work programs, producing an average annual earnings gain of over $1000, or 40%, for eligible AFDC clients in the third year after entry into the program. About 67% of the Riverside GAIN participants worked at some point during the three years after entry into the Riverside program, as opposed to just 53% of the control group.

In contrast to the experience of this work-oriented program, an evaluation of the basic education component of the GAIN program estimated that those counties which had put a priority on basic education had often not succeeded in raising the earnings, employment, or even the literacy levels of basic education participants. Four counties did significantly increase the proportion of clients who had attained their high school equivalencies, but only one of the counties was able to actually increase literacy skills as measured in standardized tests. This indicates that basic education programs may have difficulty succeeding with even their most immediate goal of increasing literacy levels, let along improving employment.

Furthermore, in most cases these increases in literacy skills and educational attainment did not translate into gains in earnings or employment.[81] By the third year after enrollment in the GAIN program, only one out of the four counties where participants had shown significant

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[79] Riccio, James, et. al. ibid. The income measurement used included Food Stamps, AFDC payments, and earnings, but not taxes or the EITC.

[80] Riccio, James et. al. ibid.

[81] Riccio, James et. al., ibid.; Martinson, Karin and Daniel Friedlander, GAIN: Basic Education in a Welfare-to-Work Program, Manpower Demonstration Research Corporation, January, 1994.

gains in educational attainment had produced significant earnings gains for those clients who were judged to be in need of education. The county in which literacy scores were raised also showed no significant impacts on earnings.

But a three-year follow-up period may not be enough to show all the impacts of an improvement in educational attainment. Some studies indicate that it may take as long as six years for the impacts of improved academic skills to show up in the workplace.[82]

Although work-oriented programs have shown the most success so far, they have still not managed to lift large numbers of their participants above poverty. What kind of model could achieve this is still an open question. Greater investment in basic skills may be necessary in order to create a larger long-term benefit than we have seen from programs oriented toward rapid job placement.

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[82] Murnane, Richard, John B. Willet and Frank Levy, The Growing Importance of Cognitive Skills in Wage Determination, Draft, 1993. See Section 4 below for a more detailed discussion.

SECTION 4: OTHER SOURCES OF EDUCATION AND TRAINING

A number of post-secondary educational institutions are important to the success of training in this country. Much of the actual vocational training and basic education funded through government programs is delivered through such institutions as community colleges and basic education/GED programs.[83] For example, long-term training for displaced workers is frequently carried out through community colleges, and many welfare-to-work programs emphasize adult basic education in their curricula. Employers themselves also provide considerable amounts of training to their workers.

Evidence on basic education and GED programs, higher education institutions (community colleges and 4-year schools), and formal training provided through the workplace is reviewed below.

Adult Basic Education and GED Programs

Many adults lack the basic skills needed to prosper in today's economy. In 1993, 13% of adults were high school dropouts, and an estimated 6% had limited proficiency in the English language.[84]

Some evidence indicates that basic skills mastery leads to higher incomes and more employment. Researchers have used survey data to analyze how mastery of one basic skill -- mathematics --affects earnings and employment.[85] They examined the graduating class of 1980 and found that 6 years after high school graduation individuals with a strong knowledge of basic (8th grade) mathematics received hourly wages that were on average $1.40 to $1.70 higher than otherwise similar individuals with poor mathematics knowledge. These estimates adjusted for the effects on wages of family background and any further education received. Even when only those students who had not received any further education were examined, there was a substantial premium for mastery of basic skills. Moreover, this premium has been growing over time: it was significantly higher for the graduating class of 1980 than for the class of 1972.

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[83] Hansen, Janet S., ed., Preparing for the Workplace: Charting A Course for Federal Postsecondary Training Policy, National Research Council, Washington, D.C., 1993.

[84] Education figure is from the Statistical Abstract of the United States, U.S. Department of Commerce, 1992. The limited English proficiency figure is from the 1990 decennial census.

[85] Murnane, Richard, John B. Willet and Frank Levy, The Growing Importance of Cognitive Skills in Wage Determination, Unpublished draft, 1993. Note that this study does not correct for unobservable differences between high and low achievers.

But the paper also concluded that basic skills investments seem to take a long time to pay off -- two years after high school graduation no premium for basic skills mastery was evident; six years after graduation it was quite large.

A variety of programs address the problem of basic skills education, ranging from workplace literacy programs to classroom training in basic skills to adult basic education and high school equivalency programs. These programs serve a substantial number of persons. For example, the Education Department has recently estimated that about 1.8 million new clients enter various adult basic and secondary education programs each year. However, few clients stay for very long -- 36% leave before completing 12 hours of instruction, and the median client receives only about 40 hours of instruction.[86]

Unfortunately, there is little reliable evaluation evidence on these programs. A number of studies have been done, but the evidence they provide is for the most part only suggestive.

The GED

Perhaps the most important findings in this area examine the earnings impacts resulting from receipt of the General Equivalency Diploma (GED), the nation's most common high school equivalency certification for adults. GEDs account for about 15% of the flow of new high school graduates nationally.[87] Basic education programs frequently have GED receipt as a major goal for their participants, and such receipt is often used as an outcome measure in evaluating these programs.

There is still debate on the labor market impacts of the GED, and further research is needed. But there is mounting evidence that GED preparation serves a credentialing function rather than a training function. That is, the GED mostly serves a gatekeeping function as a necessary credential for further education. GED test preparation itself does not seem to strongly improve participants' skills. This is not surprising given the low level of preparation that often goes into taking the test. A 1989 survey found that 75% of candidates spend 100 hours or less preparing for the test.[88] Researchers have also observed that the GED curriculum appears to "teach to the test", focusing on test-taking skills and other items useful mainly in passing the GED itself.[89]

National Evaluation of Adult Education Programs, Second Interim Report, Development Associates, September, 1993. These figures include English as a Second Language (ESL) students.

[87] Cameron, Stephen and James Heckman, "The Nonequivalence of High School Equivalents," Journal of Labor Economics, January 1993.

[88] GED Profiles: Adults in Transition, GED Testing Service of the American Council on Education, Washington, D.C., September, 1990.

[89] Quinn, L. The Test That Became An Institution: A History of the GED, Unpublished Paper, Employment and Training Institute, University of Wisconsin-Milwaukee, 1993.

In raw earnings, GED recipients make considerably less than high school graduates, showing that the degree is not a "high school equivalency" in this sense. However, researchers have estimated that GED recipients do earn an average of about 5% to 10% more than high school dropouts.[90] The general consensus is that the earnings advantage of GED receipients over high school dropouts comes from two factors:[91]

- GED recipients are more talented (as measured by achievement test scores and other indicators) than other high school dropouts even before they enter GED training courses. They also tend to have completed more years of high school than other dropouts. This effect accounts for much of the economic benefit associated with the GED.[92]

- The GED degree gives students access to additional education and training programs which require a high school equivalency. Those taking GED courses often seem to be motivated by a desire to enter further training, and after completing their GED they frequently do so. Research shows that there is a strong and significant positive effect of GED receipt on the amount of future training received from proprietary schools and employers.[93]

After differences in innate ability are taken into account, current research estimates that those GED recipients who do not go on to participate in further training have earnings essentially the same as comparable high school dropouts. Thus, the GED seems to certify already existing differences between GED recipients and other dropouts, and to provide access to further education or training for those who receive certification. But the GED by itself does not appear to improve recipients' labor market prospects very much.

These conclusions are strengthened by the results of several recent randomized experiments. In both the New Chance experiment and the California GAIN evaluation, researchers found that most of the programs which succeeded in increasing GED attainment dramatically did not succeed in improving literacy test scores among their clients.[94] The Jobstart evaluation also

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[90] This premium varies by the time elapsed since the GED was taken. Cameron, Stephen, Assessing High School Certification for Women Who Drop Out, unpublished paper, 1994; Murnane, Richard, et. al., "Do High School Dropouts Benefit From Obtaining a GED?", forthcoming, Journal of Educational Evaluation and Policy Analysis, 1995.

[91] Cameron, Stephen and James Heckman, "The Nonequivalence of High School Equivalents," Journal of Labor Economics, January 1993; Cameron, Stephen, Assessing High School Certification for Women Who Drop Out, unpublished paper, 1994; Murnane, Richard, et. al., op. cit.

[92] There is some evidence that when longitudinal data are used to take unobservable differences into account, this effect may be responsible for almost all of the earnings differential associated with the GED. See Cameron, ibid.

[93] Murnane, Richard et. al. Does Acquisition of a GED Lead to More Training for High School Dropouts?, Harvard University, December, 1993. The authors do not investigate how much of this positive effect is due to self-selection -- those who are motivated to obtain further training are probably more likely to get the GED.

found strong increases in GED attainment and no resulting increase in employment or earnings.[95]

There is also a potential downside to a reliance on the GED. To the extent that the GED provides a less time-consuming route to high school certification, it may tempt some students to drop out of conventional high school and obtain GEDs instead. This could be, as one article put it, "a mistake with drastic consequences for future earnings."[96] Evidence that this effect does in fact occur comes from the New Chance experiment. In this program, which strongly encouraged young welfare mothers to obtain a high school degree, members of the experimental group showed a statistically significant decline in the receipt of ordinary high school degrees, and a large rise in receipt of the GED.

In short, the GED is an important degree to have available for those persons who need to quickly certify their basic skills. However, many high school dropouts appear to need an education that emphasizes intensive training and the improvement of skills.

Other Basic Education Programs

A study of the impact of compulsory schooling laws has found evidence that these laws do result in small but measurable improvements in earnings and employment.[97] Since compulsory schooling laws tend to affect students who are poor and academically unskilled (other students remain in school without legal mandates), this provides evidence that basic education programs for the disadvantaged have a positive long-term effect. The magnitude of the impact on earnings appears to be about 8% per additional year of education received, although statistical problems limit the precision of this estimate.

An evaluation of the GAIN welfare-to-work program in five California counties examined AFDC recipients receiving classroom basic skills training and found mixed results.[98] Although significant positive impacts of basic education on literacy levels were found in one county, and an increase in GED attainment was found in four counties, significant positive impacts on

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[94] Martinson, Karin and Daniel Freedlander, GAIN: Basic Education in a Welfare-to-Work Program, Manpower Demonstration Research Corporation, January, 1994; Quint, Janet, et. al. New Chance: Interim Findings on a Comprehensive Program for Young Mothers and Their Children, Manpower Demonstration Research Corporation, June, 1994; Riccio, James et. al. GAIN: Benefits, Costs and Three-Year Impacts of A Welfare to Work Program, Manpower Demonstration Research Corporation, 1994.

[95] Bloom, Howard S. et. al. The National JTPA Study: Overview of Impacts, Benefits, and Costs of Title II-A, Abt Associates, February, 1994; Cave, George, et. al., JOBSTART: Final Report on a Program For High School Dropouts, Manpower Demonstration Research Corporation, October, 1993.

[96] Murnane et. al., op cit.

[97] Angrist, Joshua and Alan Krueger, "Does Compulsory School Attendance Affect Schooling and Earnings?" Quarterly Journal of Economics Vol. 61 Issue 4 (November, 1991).

[98] Martinson, Karin and Daniel Freedlander, GAIN: Basic Education in a Welfare-to-Work Program, Manpower Demonstration Research Corporation, January, 1994; Riccio, James et. al. GAIN: Benefits, Costs and Three-Year Impacts of A Welfare to Work Program, Manpower Demonstration Research Corporation, 1994.

earnings or employment were rare. By the third year after entry into GAIN, only one county showed significant increases in earnings for clients judged to be in need of education. The county which improved literacy skills was not successful in producing earnings gains.

Workplace-based programs attempt to teach literacy skills at the work site, often providing "contextual learning" that integrates literacy training with work tasks.[99] A 1989 study of a workplace basic skills program for educationally disadvantaged youth found that program graduates showed earnings and employment patterns comparable to those of more educated workers.[100] This finding indicates that the program succeeded in rectifying the educational deficiencies that it was designed to address. However, the study covered only a few hundred employees in a single workplace.

Higher Education -- Community Colleges and 4-Year Colleges

Higher education confers large economic advantages. In 1993, the median earnings of males with 4-year college degrees or more were $41,600, those with 2-year associate degrees earnings earned $30,000, but high school graduates earned just $23,100.[101]

At first blush it is unclear how much of these earnings differences are due to innate differences in the individuals receiving education, instead of the effect of education itself. A recent study by researchers from Harvard and Princeton examines this question.[102] This paper uses longitudinal data to isolate the impact of an additional year of post-secondary education on earnings after adjusting for the effects of ability and family background.[103]
The basic findings from this study are:

- *Much of the higher income of college graduates seems to be a result of education -- it is not due to pre-existing differences between people who go to college and people who*

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[99] Note that this bears some similarity to the successful approach used by the San Jose CET project.

[100] Hargroves, Jeanette S. "The Basic Skills Crisis: One Bank Looks at its Training Investment," New England Economic Review, September/October 1989.

[101] Bureau of Labor Statistics, Current Population Survey. The figures are for all males age 25 or older; 1993 dollars.

[102] Kane, Thomas J. and Cecilia Rouse, Labor Market Returns to Two and Four-Year College: Is a Credit a Credit and do Degrees Matter?, Working Paper #311, Industrial Relations Section, Princeton University, January, 1993.

[103] Another recent study of the same data by W. Norton Grubb resulted in different conclusions than the study summarized here. However, a reanalysis of his data has shown that this difference can be accounted for by errors in coding. See W. Norton Grubb, "The Varied Economic Returns to Postsecondary Education: New Evidence From the Class of 1972", Journal of Human Resources, Volume 28, Number 2, 1993; and the reply to it in Kane, Thomas and Cecilia Rouse, "Comment on W. Norton Grubb", Preliminary Draft, August, 1993.

don't. College students tend to come from more privileged families or have more innate ability than those who don't go to college. But this study estimates that even after adjusting for differences in ability and family background, the average worker with college experience earns about 5% to 10% more per additional year of college courses completed than an otherwise similar high school graduate.

- *Both community colleges and 4-year colleges have similar payoffs per year of education completed.* Community colleges provide mostly vocational education -- fully two thirds of community college students major in vocational areas, as opposed to just 5% of those in 4-year schools.[104] Despite this difference, income gains per year of education completed are essentially the same for 2-year and 4-year colleges.

- *Even students who did not complete degrees enjoyed substantial income gains.* Substantial earnings increases appear to result from post-secondary credits whether or not students complete formal degree programs. Even students who dropped out before degree completion show earnings gains commensurate to the number of years that they completed.[105]

Other research which controls for differences in innate ability has found even larger earnings gains from higher education. A 1992 study by Princeton researchers examined the education and earnings of twins growing up in the same family: clearly individuals with similar backgrounds and identical genotypes.[106] Even for twins, differences in education led to substantial differences in earnings. Another study, which examined only families where the parents had not themselves attended college, estimated that children in these families gain approximately 10%-15% in annual earnings for each year of college attended.[107]

There is also some evidence that these rewards are experienced by older workers returning to school. In 1991, 33% of all undergraduates enrolled in post-secondary education were over the age of 25. Many of them were workers returning to school to improve their earnings. For community colleges, the proportion was even greater -- almost half (44%) of undergraduates were over 25. The studies and surveys discussed above include the experience of these students, and find strong positive effects of education. More direct evidence on the positive effects of education on older students comes from a recent study which tracked students who returned to school for additional education. The study found significant positive impacts.[108]

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[104] National Assessment of Vocational Education Interim Report to Congress, Office of Educational Research and Improvement, U.S. Department of Education, Washington, D.C. 1993.

[105] Besides the Kane and Rouse study, another article that supports this conclusion is Hollenbeck, K. Post-Secondary Education as Triage: The consequences of postsecondary education tracks on wages, earnings, and wage growth, W.E. Upjohn Institute for Employment Research, April, 1992.

[106] Ashenfelter, Orley and Alan Krueger, "Estimates of the Economic Return to Schooling from a New Sample of Twins," American Economic Review, December, 1994.

[107] Card, David. "Using Geographic Variation in College Proximity to Estimate the Return to Schooling", National Bureau of Economic Research Working Paper #4483, October, 1993.

Not only are returns to higher education large, but they have been increasing rapidly. In the United States the gap between the median income of male 4-year college and high school graduates doubled from about 40% in 1979 to around 80% in 1993.[109] Increases in rewards to education are also taking place in other advanced nations (to varying extents).[110]

Employer-Provided Training

Firms provide a great deal of formal training directly to their workers. Although the available data are not very reliable, the best estimates are that about $40 billion to $50 billion annually is spent on the formal provision of training by American companies.[111]

In recent years many states have moved to encourage this type of training by providing grants to firms in order to train their workers. The goal of these policies is to increase employer investments in upgrading the skills of their workforce, thus boosting firm productivity. Workers who participate in the training should also be helped, since their increased skills will make them more valuable to employers.

There is evidence that these government subsidies can be successful in encouraging companies to provide additional formal training to their workers. Increased training has, in turn, been found to increase company productivity:

- A survey of 157 small manufacturing firms in Michigan who received training grants from the state government estimated that the subsidies led the firms to roughly triple the amount of training they provided to their workers in the year they received the grant.[112]

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[108] Angrist, Joshua and Whitney Newey, "Over-Identification Tests in Earnings Functions With Fixed Effects", Journal of Business and Economic Statistics, July, 1991.

[109] Median earnings of all males aged 25 or older who were high school graduates compared to male 4-year college graduates with a BA or more who were 25 or older.

[110] "Earnings Inequality: Changes in the 1980s", in OECD Employment Outlook, OECD, 1993. Freeman, Richard B. and Lawrence Katz, "Rising Wage Inequality: The United States vs. Other Countries." In Working Under Different Rules, R.B. Freeman, Ed. New York: Russell Sage Foundation, 1994.

[111] U.S. Congress, Office of Technology Assessment, Worker Training: Competing in the New International Economy, OTA-ITE-457, Washington, D.C., September, 1990. These estimates include only formal training programs. Informal on-the-job training is not included.

[112] Holzer, Harry et. al., "Are Training Subsidies for Firms Effective? The Michigan Experience," Industrial and Labor Relations Review, November, 1993.

- The Michigan researchers also estimated that the additional training provided by manufacturing firms significantly reduced the rate at which output had to be scrapped.

- A study of formal training programs in 155 manufacturing firms found that those firms introducing training programs in 1983 had a productivity growth rate over the next three years that was an average of 19% greater than firms which did not.[113] Firms introducing training programs generally began with a productivity level below the industry average, but within three years of introducing training they had brought their productivity level up to industry standards.[114]

A number of studies also suggest that formal company-provided training can have significant positive effects on the future earnings of workers who receive it.[115] Researchers have generally found that employer-provided training increases worker earnings significantly, although the exact amount of the increase depends on such factors as the time since the training was received, the amount of training received, and whether or not the worker leaves the firm where the training was provided.

Economists have estimated that the rate of return to workers receiving this type of training is as high or higher than the gains that result from a similar amount of additional post-secondary education. Earnings gains from employer-provided training have been found for both more educated and less educated workers. These studies isolate the effect of training on earnings by controlling for family background, ability test scores, education, and previous experience.

The research in this area is encouraging, but none of the studies cited above were randomized experiments. It is therefore not certain whether self-selection could affect the results. That is, workers who are selected by their employer to receive training could have unobservable characteristics (e.g. motivation levels) that would lead them to earn higher pay regardless of any training. This is an especially problematic issue in the research on increases in earnings for workers who receive training, where one author has found evidence that self-selection is occurring.[116] More research would be useful to determine the type and magnitude of benefits created by company training, which types of training are most effective, and how to facilitate training on the part of private firms.

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[113] Bartel, Anne, "Productivity Gains from the Implementation of Employee Training Programs", Industrial Relations, forthcoming.

[114] The effects of "reversion to the mean" were controlled for in examining the impacts of training.

[115] Blanchflower, David and Lisa Lynch, "Training At Work: a comparison of U.S. and British Youths", in Lynch, ed. Training and The Private Sector: International Comparisons, University of Chicago Press, forthcoming; Brown, Charles, "Empirical Evidence on Private Training", in Research In Labor Economics, R. Ehrenberg, ed., JAI Press, 1990; Hollenbeck, Kevin, "The Economic Payoffs to Workplace Literacy", W.E. Upjohn Institute for Employment Research Working Paper Number 93-21, October, 1993; Lillard, Lee and Hong Tan, Private Sector Training: Who Gets It and What Are Its Effects?, Rand Corporation, March, 1986; Lynch, Lisa, "Private-Sector Training and The Earnings of Young Workers", American Economic Review, March, 1992.

[116] Lynch, Lisa, ibid.

SECTION 5: NEW JOBS: RE-EMPLOYMENT PROGRAMS FOR DISLOCATED WORKERS

Dislocated workers are workers who have been permanently laid off and often face a difficult transition to a new job. Overall, these workers are a more job-ready population than the economically disadvantaged adults served by the other job training programs discussed previously. A 1990 Census Bureau survey found that dislocated workers had an average of 12.5 years of education, almost equal to the average level of 12.7 years. Only 14% of participants in the Employment Dislocation and Worker Adjustment Assistance (EDWAA) program, the Federal government's major training program for displaced workers, had less than a high school education, while 30% of the economically disadvantaged adults in JTPA Title II were high school dropouts.

At the same time, while displaced workers are generally not as poor as the clients of JTPA, welfare-to-work, and other programs designed specifically for the disadvantaged, they are by no means equivalent to the general population in income or employment opportunities. Even a year after they lose their jobs, these workers have poverty and unemployment rates that are far higher than the general population. Displaced workers -- especially those displaced from jobs which they have held for a long period -- face substantial earnings losses due to their job displacement, and often have difficulty finding new work.[117] The most recent Census Bureau dislocated worker survey found that workers displaced from high-tenure jobs showed drops in earnings of over 20% even after they found new full-time jobs.[118]

A variety of re-employment programs for dislocated workers have been tried, ranging from conventional training programs to bonuses paid upon receipt of a new job. Although many of these approaches are still experimental and are being used only in a few pilot programs, much reliable evaluation evidence is available.

Profiling and Job Search Assistance

Traditionally, the vast majority of unemployed workers receiving Unemployment Insurance (UI) benefits have not received reemployment services to help them find new jobs. A 1988 study found that even among those long-term UI recipients who exhausted their benefits, just 6% were receiving job search assistance more intensive than the simple work registration offered by the Employment Service, and only 1.4% attended training programs.[119]

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[117] U.S. Census Bureau dislocated worker surveys, January, 1992; unpublished U.S. Department of Labor tabulations. Over a year after losing their jobs workers displaced in 1990 still had an unemployment rate of 23%, triple that of the general population. Their poverty rate was roughly one and a half times as high.

[118] U.S. Census Bureau dislocated worker survey, November 1994; unpublished Department of Labor tabulations.

A recent series of experiments in five states -- Minnesota, Nevada, New Jersey, South Carolina, and Washington -- has examined the effectiveness of a two-stage combination of profiling and job search assistance in reducing unemployment.[120] The profiling stage, which occurs when individuals first claim their UI benefits, uses demographic and work history information to identify those persons who are most likely to remain unemployed long-term, and thus have the greatest need for re-employment services. The identified recipients then receive intensive job search assistance and counseling from UI staff.

Impacts from these experiments are summarized in Table 2. The demonstrations were conducted as random assignment experiments, making their results particularly reliable. The exact results of the experiments vary, but the general findings are similar:

- *Job search assistance clients found a new job more quickly, and receipt of UI benefits was reduced.* Those receiving job search assistance found new employment an average of one-half of a week to 4 weeks sooner than similar individuals who did not receive assistance. Most states averaged around a one week reduction in the duration of UI benefit receipt.

- *The program was cost-effective for the government.* In each state experiment the savings in Unemployment Insurance (UI) payments plus the increase in tax receipts due to faster re-employment were more than enough to pay for program costs. Savings to government averaged around two dollars for every dollar invested in targeted job search assistance.

- *Job search participants did not end up in lower-wage jobs than non-participants.* Some have argued that mandatory job search leads to workers taking jobs that do not pay as well as jobs they otherwise would have found without the program. There was no evidence that this was the case. In the two experiments where earnings data was available, job search participants not only found work more quickly, but hourly earnings were similar to non-participant workers.

Where information on the time pattern of the earnings gains was available, job search participants earned more than controls during their first year or two after receiving help finding a job. After this period, other workers who had not received JSA began to earn similar amounts.[121] The earnings gains produced by JSA are significant but not long-lasting.

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[119] Richardson, Philip et. al., Referral of Long-Term Unemployment Insurance Claimants to Reemployment Services, U.S. Department Of Labor Occasional Paper 89-2, 1989. Reemployment services here do not include the Job Service, which generally provides only work registration services.

[120] For a good overview of the results of these experiments, see Bruce Meyer, "Policy Lessons From the U.S. Unemployment Insurance Experiments", National Bureau of Economic Research Working Paper #4197, 1992.

[121] Corson, Walter and Joshua Haimson, The New Jersey Unemployment Insurance Reemployment Demonstration Project: SSix-Year Follow-Up Report, Mathematica Policy Research, December, 1994. This study finds no significant impacts of job search assistance during years 3 to 6 of the 6 year follow-up.

Table 2: Impacts of State Profiling and Job Search Assistance Experiments.

Experiment	Average change in UI weeks received	Additional Earnings in Year After UI Claim	Government Benefit to Cost Ratio
Minnesota	-4.32***	NA	1.9
Nevada	-1.60***	NA	2.4
New Jersey	-.75*	$235	1.8
South Carolina	-.70*	NA	NA
Washington	-.47*	$292	4.8

NA Data not available.
*** Impact significant at 1% level or better.
* Impact significant at 10% level.

SOURCES: Corson, Walter, The New Jersey Unemployment Insurance Reemployment Demonstration Project Follow-Up Report, Unemployment Insurance Occasional Paper 91-1, U.S. Department of Labor, 1991; Johnson, Esther, ed. Reemployment Services to Workers Having Difficulty Becoming Reemployed, Unemployment Insurance Occasional Paper 90-2, U.S. Department of Labor, 1990; Johnson, Terry et. al., Evaluation of the Impacts of the Washington Alternative Work Search Experiment, Unemployment Insurance Occasional Paper 91-4, U.S. Department of Labor, 1991; Meyer, Bruce, Policy Lessons From the U.S. Unemployment Insurance Experiments, National Bureau of Economic Research Working Paper 4197, October, 1992.

The results of the experiments were generally similar, in that all produced significant reductions in UI receipt. However, two experiments -- in Minnesota and Nevada -- had positive results much greater than the others. Programs in these states reduced UI receipt by 4 weeks (Minnesota) and 1.6 weeks (Nevada).[122] These states provided the most intensive job search assistance services to their clients, including individual case management. This may partially account for the magnitude of the impacts in these states.

[122] Some part, though not all, of the very large Minnesota results are probably accounted for by selection bias in the control group. About a third of the controls were not UI eligible and thus differed from the program participants.

Profiling and job search assistance were mandated for all state UI programs in the Extended Unemployment Compensation legislation enacted in 1993, with implementation of this directive to occur over the next several years.

Self-Employment Assistance

Self-employment programs allow unemployed workers the option of starting a small business as an alternative to looking for wage and salary work. Unemployed workers are given training and assistance in setting up their business, and their UI payments are used as support while they do so.

In 1987, the Department of Labor launched demonstration projects in Washington and Massachusetts that added a self-employment option to the UI programs in those states. Although the details of the programs differ, they both require enrollees to participate in entrepreneurial training and make use of business counseling in order to receive self-employment allowances or (in the case of the Washington program) a lump-sum payment to help set up their business. The programs were evaluated in a random assignment experiment that compared program participants to a control group who had expressed interest in starting a business but were not allowed to participate in the program.

Self-employment is not for everyone; research indicates that a small fraction (2% to 5%) of UI recipients are likely to enter these programs. Results from the demonstration projects also indicate that those who do try self-employment are disproportionately better educated, older, and white-collar.

Results from the evaluations were quite encouraging:[123]

- *The likelihood of starting a business roughly doubled for those participating in the program.* In both demonstrations about 25% of the control group managed to start their own business, whereas roughly 50% of program participants did.

- *Participant businesses were no more likely to fail over the first 18 months of operation than control group businesses were.* This finding held true for both demonstrations.

- *Program participants were significantly more likely to enter any employment than control group members.* Over the total 18-month follow-up period, the program increased the total time spent employed (either self-employed or employed by others) by two months in Washington and three months in Massachusetts.

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[123] Benus, acob et. al., A Comparative Analysis of the Washington and Massachusetts UI Self-Employment Demonstrations, Abt Associates, November, 1993.

- *The demonstrations increased total earnings.* Self-employment participants in Massachusetts earned over $7,500 more than non-participants in the control group during the 18 months following entry. There were also fairly large positive earnings impacts in Washington, but they were not statistically significant.

The NAFTA legislation passed in 1993 allows states to use monies from the UI trust fund to pay self-employment allowances under state-established self-employment programs.

Re-Employment Bonuses

Re-employment bonus programs pay a reward to unemployed workers who find new employment within a specified time and keep it for some minimum period. Usually the award is around 3 to 6 times the weekly UI benefit amount (which varies greatly by individual), or about $500 to $1,500. Past demonstrations have required workers to be re employed within a period ranging from about 6 to 12 weeks in order to qualify for a bonus.

The evidence on reemployment bonuses is mixed. The bonus offer does appear to reduce UI receipt slightly, but apparently the reduction is often not enough to pay for the costs of the program to government. Whether the bonus provides a net benefit to society is still an open question, the answer to which depends on whether workers increase their earnings due to bonus receipt.

Three major policy experiments have been performed. In Illinois, a reemployment bonus offered to UI claimants reduced duration on UI by 1.15 weeks and reduced the total annual benefits claimed by $115.[124] Both impacts were statistically significant.[125] In Washington State and Pennsylvania, a variety of different bonus designs were tried.[126] Five out of the ten bonus offers resulted in significant declines in the annual weeks of UI received. These reductions ranged from one-half a week to almost one week. Generally, large bonus offers and long qualification periods made reemployment bonuses more effective.

However, in Pennsylvania and Washington State the actual reductions in UI benefits paid due to the reemployment bonus offer were not very large (although they were often statistically significant). Generally, these reductions ranged from about $50 to $100 per year. In the Pennsylvania and Washington experiments, government generally lost money on the

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[124] Woodbury, Stephen and Robert Spiegelman, "Bonuses to Workers and Employers to Reduce Unemployment: Randomized Trials in Illinois.", The American Economic Review, September, 1987.

[125] An additional treatment in the Illinois experiment offered a bonus to businesses who hired unemployed workers on UI. This treatment did not have a significant impact.

[126] Decker, Paul and Christopher O'Leary, An Analysis of Pooled Evidence from the Pennsylvania and Washington Reemployment Bonus Demonstrations, U.I. Occasional Paper 92-7, U.S. Department of Labor. Washington, D.C. 1992.

reemployment bonus offer -- for nine out of ten bonus offers, the amount of the bonus payments plus the administrative costs necessary to offer them exceeded the savings in UI payments.

It should also be noted that in all three experiments a number of workers who were eligible to receive reemployment bonuses when exiting UI did not apply for or receive their bonus. If they had, then the program would have cost more and lost more money for government than it did.

But on the positive side, it is possible that the bonus offer increased worker earnings due to the slightly earlier reemployment that resulted. It is unclear whether this occurred. Some positive benefits on earnings were found in Pennsylvania and Washington, but they were statistically insignificant and could have occurred by chance. If these benefits are included, then total benefits to society from a bonus offer outweigh the costs.

A fourth policy experiment, the New Jersey reemployment experiment, tested the impacts of job search assistance plus reemployment bonuses against job search assistance alone.[127] Impacts were similar to the other three reemployment bonus experiments -- there was a positive impact on employment and earnings, but this impact was not enough to counterbalance the costs of the bonus. There was not perfect random assignment in the selection of the treatment group in this experiment.

Several economists have pointed out that a bonus system could draw more people into the UI system, thus driving up government costs. Some unemployed workers are eligible for UI benefits but choose not to receive them, because they expect to be recalled to their old job or find a new job soon. Unless safeguards were built in, bonuses would give these people an additional incentive to claim UI benefits so they could receive a bonus once their new job came through. This issue can be addressed in the design of a bonus system. For example, eligibility for the bonus could be limited in certain ways (e.g., to those workers who are not recalled to their old job), and the bonus size could be capped to prevent an overly large incentive for "gaming" the system.

Training Programs for Dislocated Workers

A number of local demonstration projects which provided training to dislocated workers have been evaluated over the past decade. In addition, two evaluations of the effects of the Federal Trade Adjustment Assistance (TAA) program, which provides long-term training to some clients, have been completed. The studies vary widely in methodology and in findings, but it is possible to draw some general conclusions from them.

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[127] Corson, Walter and Joshua Haimson, The New Jersey Unemployment Insurance Reemployment Demonstration Project: Six-Year Follow-Up Report, Mathematica, December, 1994.

Current evaluations indicate that short-term skills training has not been particularly successful in producing earnings gains for dislocated workers, but the evidence is not entirely conclusive. In three studies, which were effectively random assignment, workers offered relatively short-term training plus job search assistance showed no significant increase in earnings or employment when compared to workers receiving job search assistance alone.[128] This training consisted of 3 to 6 months of either classroom or on-the-job training. The workers did not receive income support beyond regular UI payments to support their training efforts. These studies provide strong evidence that short-term training does not work for dislocated workers.

However, it should be noted that the designs of the experiments make it difficult to determine the effects of the training on long-term employment prospects of dislocated workers. In two of the studies the follow-up period was either 6 months or a year, probably not long enough for all the effects of classroom training to show up. In the third there were technical problems related to random assignment.[129] More research may be called for here.

A study of dislocated workers, and several which examine older college students, have found significant positive impacts of long-term training. More general evidence on returns to higher education also suggests that long-term training pays off for some dislocated workers. However, there is no random assignment evidence in this area.

A recent study has examined Pennsylvania's Displaced Worker Employment and Training Program (DWETP)[130]. This program paid full tuition and the costs of books and supplies at a local community college for any worker displaced from his or her job. It also provided extensive counseling for enrollees.

The study examined DWETP enrollees who had been displaced from a job which they had held for at least three years. The average age of these workers was about 35 years old. The authors found that workers who received one to two years of community college training showed earnings gains of about 6% to 7% per year of education received. These returns appeared to be sustained throughout the worker's career after leaving the program. Preliminary findings are that total earnings gains were roughly equal to the total costs invested in training, meaning that the program generated social benefits about equal to its cost.

The DWETP program also provides interesting evidence on the extent to which displaced workers will take up an offer of free tuition for long-term training. Although the sample is limited to those workers who enrolled in at least one course (thus excluding those who had no interest in further education), only about 25% of DWETP enrollees completed a two-year

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[128] These results were found in the Texas experiments, the Buffalo training project, and the New Jersey Reemployment Demonstration project. Leigh, Duane, "An Overview of Existing Evaluation Evidence For the U.S.", in Assisting Workers Displaced By Structural Change: An International Comparison, Upjohn Institute, 1994.

[129] Corson, Walter, et. al. New Jersey Unemployment Insurance Reemployment Demonstration Project, U.S. Department of Labor, Unemployment Insurance Occasional Paper 89-3, April, 1989.

[130] Jacobson et. al., "The Returns from Classroom Training for Displaced Workers", Draft, September, 1994.

degree or certificate. On average, the total number of for-credit classes completed was about 6. Since the community college worked on a quarter system, this represents slightly less than a half a year of education. These figures are not trivial, but they do indicate that only a minority of displaced workers are likely to be interested in long-term training of a year or more.

Another study has examined the payoff to post-secondary education received by veterans returning to civilian life.[131] Veterans are older individuals returning to school, and may be considered as analogous to dislocated workers. The study did find significant payoffs to post-secondary education received by these veterans. However, perhaps because the veterans had only been out of school for a few years, the payoff was only about 4.5% higher earnings per year of education received.

Finally, other direct evidence on the positive effects of education on older students comes from a recent study which tracked older students who returned to school for additional education. The study found significant positive impacts.[132]

While the results of these three studies are encouraging, it should be noted that none was a random assignment evaluation, and only one specifically examined dislocated workers. There are in fact no random assignment evaluations available of long-term training programs for dislocated workers. Further research would be helpful in this area.

The conclusion that long-term training is likely to assist at least some dislocated workers is further supported by general evidence on the effectiveness of post-secondary education that was discussed in Section 4. Evidence on the effectiveness of community college education is especially applicable to dislocated workers. This is because government programs frequently supply long-term training to dislocated workers by contracting with community colleges to provide vocational courses.[133] Furthermore, community college students are often comparable in age to dislocated workers. More than a quarter of all the community college students examined in the studies cited in Section 4 were still attending college at age 25 or over, and about half of dislocated workers are aged 18 to 34.[134]

The steady increase in the rewards for post-secondary education also indicates that advanced training is becoming more valuable in the workplace. This increase is occurring in many industrial nations, and provides evidence that investing in workforce skills brings high returns.

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[131] Angrist, Joshua, "The Effect of Veteran's Benefits on Education and Earnings", Industrial and Labor Relations Review, July, 1993.

[132] Angrist, Joshua and Whitney Newey, "Over-Identification Tests in Earnings Functions With Fixed Effects", Journal of Business and Economic Statistics, July, 1991.

[133] Hansen, Janet, ed. Preparing for the Workplace: Charting A Course For Federal Postsecondary Training Policy, National Research Council, Washington, D.C, November, 1993.

[134] Adelman, Clifford, The Way We Are: The Community College As American Barometer, U.S. Department of Education, February, 1992; Congressional Budget Office, Displaced Workers: Trends in the 1980s and Implications for the Future, February 1993.

Two evaluations of the Trade Adjustment Assistance (TAA) program -- a major supplier of long-term training to dislocated workers -- have recently been completed, and are frequently cited as providing evidence on long-term training. But the evaluations did not use random assignment, and various problems undermine their usefulness in determining training impacts:

- A Mathematica study found that TAA trainees had lower earnings over a 3-year period than other dislocated workers who did not receive training.[135] But it is difficult to know how to interpret this, since researchers found that trainees were a self-selected group who were more likely to have made major career changes than non-trainees. This fact in itself could lead to lower earnings. For this reason, the researchers found that they could not draw any conclusions on training effectiveness.[136]

- The short follow-up period of the Mathematica study (three years after entry into training were examined) also limits its effectiveness in determining the impacts of long-term training. Workers were in training for up to two years, so only one to two years of post-training earnings were available. According to the Pennsylvania DWETP study discussed above, positive earnings resulting from long-term training did not begin to appear until about a year and a half to two years after exiting training. This long delay is probably due to career shifts by trainees. Such career shifts often lead to low initial earnings that rapidly increase as experience is gained in the new career. A substantial number of the trainees examined in the Mathematica study had taken up new careers.

- A second evaluation of TAA, by the Office of the Inspector General at the Department Of Labor, did not directly evaluate the effects of long-term training.[137] The evaluation found that many workers receiving TAA benefits were re employed at lower wages than they had received at their previous jobs. However, these TAA recipients were not compared to any control or comparison group of dislocated workers to determine if their earnings loss was more or less than would have been expected for a typical job loser. Also, the evaluation found that half of these TAA recipients did not receive long-term training.

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[135] Corson, Walter et. al. International Trade and Worker Dislocation: Evaluation of the Trade Adjustment Assistance Program, Mathematica Policy Research, April, 1993.

[136] The researchers stated that "because individuals were not selected randomly to participate in training, we cannot interpret the differences in the employment and earnings of trainees and non-trainees as unbiased estimates of the impact of training on these outcomes." Ibid, p. 121.

[137] Trade Adjustment Assistance (TAA) Program: Audit of Program Outcomes in Nine Selected States, Office of the Inspector General, U.S. Department of Labor, September, 1993.

Programs for Dislocated Veterans

One class of dislocated workers are veterans exiting the military service and searching for civilian jobs. There have always been substantial numbers of these veterans, but the recent downsizing of the national defense establishment has increased their population.

The Transition Assistance Program (TAP) is a Department of Labor program that provides 2 to 4 days of job search instruction and assistance to military personnel displaced from their jobs by downsizing. A recent evaluation estimates that in 1990 TAP participants found new employment several weeks more quickly than a comparison group of displaced veterans who did not participate.[138] It seems likely that part of the positive effects found in this evaluation are due to unobservable differences between TAP participants and others. However, since researchers made efforts to correct for this possible source of error, the basic finding of positive effects of TAP participation may be accurate.

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[138] Transition Assistance Program: Initial Impact Evaluation, U.S. Department of Labor, Assistant Secretary for Veterans Employment and Training, November, 1993.

SECTION 6: CONCLUSIONS

This section first summarizes the evidence that has been reviewed according to the type of intervention used in the programs. It then offers several overall conclusions.

Impacts By Type of Service Provided

Four basic interventions are commonly used in different training and employment programs: job search assistance, short-term classroom training, long-term classroom training, and subsidized employment. The effects of these services naturally vary greatly depending on the quality of the program staff and the exact curriculum used. Despite this variation, some general conclusions on the effectiveness of different types of services for the various populations can be drawn.

Note that several of the interventions described previously do not fit neatly into the four categories presented here. Many of these other programs -- such as the programs for teen mothers which require school attendance in exchange for welfare benefits -- have shown success. Others have been successful in some of their goals, but not all. For example, the STEP summer education program for in-school youth created a short-term boost for academic outcomes, but did not raise high school graduation rates over the long term.

Job Search Assistance

Job search assistance (JSA) had positive effects for every population for whom it has been tried. JSA appears to accelerate the process of getting a job, but not make a permanent difference in the quality of job obtained.

JSA is generally one of the cheapest types of interventions. It is usually a worthwhile investment, with benefits outweighing costs by a substantial amount.

- The most compelling evidence for the effectiveness of JSA comes from 5 state experiments providing JSA to workers considered likely to be unemployed long-term. JSA significantly reduced the receipt of unemployment insurance in all these experiments. Savings to government from more rapid reemployment averaged two dollars for every dollar spent on JSA.

- Several JSA programs have produced gains for out-of-school disadvantaged youth, but others have not been successful. Boston's Jobs For Youth program and the 70001, Ltd. program created significant earnings gains of roughly $900 for graduates during about the first year after intake into the program. These programs were fairly expensive for JSA interventions. They included extensive counseling and up to 40 hours of job

readiness classes, and in some cases provided follow-up after youth were placed in first jobs.

These job placement services helped youth find jobs more quickly, but did not improve long-term employment prospects. By one to two years after entering the program the participants' earnings were not significantly different from those of similar youth who hadn't participated in JSA.

In contrast, the less intensive JSA component of JTPA has not been successful in creating any earnings gains for disadvantaged youth. The evidence on JSA for youth is therefore mixed, with more intensive JSA services seemingly needed to produce results.

- JOBS programs for single mothers on welfare often emphasize JSA as part of the package of services they offer. These programs have been successful in producing moderate earnings gains for welfare recipients. Gains have usually averaged about $300-$700 in annual earnings for all program eligibles, even when only about half of the eligible group actually received services. These results are notable because they show evidence of long-term effects -- increases in earnings have often been sustained for about 3 years.

- The evaluation of the JTPA program estimated that the JSA/On-the-Job Training segment of the program led to annual earnings gains of more than $1,100 for adults. Only about half of those served under this program segment received JSA, so it is not known exactly how much of these results are due to JSA in particular and how much to on-the-job training.

Short-term Classroom Training

The record of short term (3 to 6 month) classroom training has been very mixed.[139] A few programs have shown some success, but in most cases short-term classroom training has not been found to be particularly successful.

- Short-term classroom training for disadvantaged adults in the JTPA program did not produce earnings gains for females. However, by the second year after program graduation (the last year studied), males referred to classroom training showed earnings gains of about $900 per year, an effect that fell just short of statistical significance.

- Short-term classroom training by itself usually has not been a successful strategy for youth. The best estimates are that short-term training under the CETA and JTPA programs did not improve the employment prospects of youth graduates. The Jobstart demonstration tested 13 different sites which provided short-term training to youth,

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[139] "Classroom training" is defined here to mean training that does not take place at the work site, as on-the-job training does.

and found that only one was successful in producing gains in earnings and employment for its graduates.

- The one short-term classroom training program for youth which has been reliably evaluated and found to produce large and statistically significant earnings gains is the Center for Employment and Training (CET) project in San Jose. The evaluation estimated that CET produced average annual earnings gains of over $3,000 for youth enrollees during the third and fourth year after graduation. There is also reliable evidence that CET training produces significant earnings gains averaging $1,500 annually for minority female single parents.

  Although CET training takes place in the classroom, the program is designed to simulate many aspects of the workplace environment the students will join once they graduate. Instructors are taken from industry, and the curriculum is constantly overhauled to make sure that the skills taught are needed by local businesses. Basic skills are taught, but within a vocational context. The CET experience shows that short-term classroom training can work if it is closely linked to workplace skills.

- Available evidence suggests that short-term skills training has not been successful in producing earnings gains for dislocated workers. In three studies, two of which were randomized experiments, workers offered short-term training plus job search assistance showed no significant increase in earnings or employment when compared to workers receiving job search assistance alone.[140] But in two of the studies the follow-up period was about a year, not long enough for all the effects of classroom training to show up.

- There is not yet much information on the impact of classroom training for welfare recipients, but existing evidence is mixed. An evaluation of classroom literacy training in a welfare-to-work program found that this type of training did produce significant gains in literacy and classroom achievement for graduates, but these gains did not translate into increased earnings or employment during the evaluation's 3-year follow-up period. However, a 3-year follow-up may not be enough time to see all the benefits of increased literacy.

  Another evaluation of 4 classroom training programs for single mothers (most of whom were welfare recipients) found that only one of the programs -- the San Jose CET project once again -- produced significant improvements in participant earnings.

It should be noted that research on short-term classroom training is often difficult to interpret because the earnings pattern resulting from such training makes it necessary to follow program participants for a long period in order to determine if training effects are positive. There is usually an initial negative effect on earnings as attendance at the classroom training takes time away from work, and earnings increases only begin to show up well after program graduation. Some evaluations have not followed workers long enough to correct for this effect.

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[140] Most of this training was short-term classroom training, but some was on-the-job training.

Long-Term Classroom Training

Direct and indirect evidence strongly suggests that long-term education and training is likely to be an effective strategy for some disadvantaged persons and displaced workers.

- Most long-term post-secondary training in this country takes place in the four-year and community college system. A number of studies estimate that higher education brings income rewards in the area of 6% to 12% per year of education completed. The studies find this increased income even after correcting for pre-existing differences between those who attend college and those who do not.

- A recent study of long-term community college training for displaced workers in Pennsylvania has found earnings increases of roughly 6% to 7% are associated with each year of training. We consider this the soundest study available on long-term training specifically for displaced workers. The study also indicates that only a minority of displaced workers are likely to enter long-term training if the option is offered to them.

  Since training for dislocated workers is often offered through the community college system, the positive evidence on the returns to community college is encouraging for displaced workers as well. Furthermore, the steady increase in the rewards for post-secondary education also indicates that advanced skills are becoming more valuable in the workplace.

- The Job Corps offers an intensive residential training program to disadvantaged youth that takes about a year to complete. An evaluation has estimated that young people enrolling in the Corps show average earnings gains of roughly 15%, and reductions in the incidence of serious crime. These positive impacts of long-term Job Corps training for disadvantaged youth are in sharp contrast to the mostly negative estimates for the impacts of short-term, less-intensive training for this population. However, it is uncertain how many of these benefits occur simply because Job Corps training is long and intensive. The Job Corps is also marked by a residential environment combined with support services.

  A caveat on the existing Job Corps evaluation is that it is not random assignment. A random assignment Job Corps study is currently collecting information in the field.

Subsidized Employment Approaches

There are several different varieties of subsidized employment. In supported work models, clients are provided with extensive support services during a subsidized employment period that lasts around a year. Other approaches provide subsidized employment combined with minimal training or support. In on-the-job training, another form of subsidized employment, a government agency pays a private sector employer to hire and provide informal training to disadvantaged individuals. When the subsidized job is over, clients may stay with their employer without a subsidy, or they are given job search assistance to find new work.

Subsidized employment has proven remarkably successful for single mothers who are on AFDC. In some cases it has proven successful in helping other adult populations, although the evidence is more mixed than for single mothers.

- Subsidized employment programs for female welfare recipients have consistently demonstrated success in raising earnings and employment. These programs have raised the average annual earnings of participants by roughly $1,500 to $2,000 (about 40% to 50%) in each of the first two years after leaving the program. They also reduced welfare receipt somewhat, and were cost-effective.

- The JTPA evaluation showed that disadvantaged adult enrollees recommended for short-term (3 to 6 month) on-the-job training or job search assistance showed substantial earnings gains averaging more than $1,100 annually during the second year after graduating JTPA training. This method was especially successful for AFDC recipients, who showed average earnings gains of $2,000 annually.

- Subsidized employment alone appears to be much less successful in creating long-term benefits for disadvantaged youth and ex-criminal offenders. In one experiment conducted in the late 1970s these groups showed significant earnings gains while they were actually participating in supported work, but these were not sustained once the one-year supported work period ended. The JTPA evaluation also found that on-the-job training did not appear to work well for disadvantaged youth enrollees.

  However, there is evidence that subsidized employment can create immediate growth in earnings and employment for disadvantaged youth while they are actually employed in subsidized jobs. For example, the offer of a minimum-wage job under the Youth Incentive Entitlement Pilot Project was successful in greatly increasing the employment rates among disadvantaged minority youth while the program was in place. But it appears to be necessary to link this subsidized employment to other forms of training or services to produce lasting benefits.

- The evidence for on-the-job training for displaced workers is uncertain so far. Additional research is needed.

Overall Conclusions

Surveying the evidence leads to several general conclusions:

1) At least some services have been successful for every population examined. Employment services have produced significant gains in earnings and employment for disadvantaged adults and youth, single mothers, and displaced workers. JTPA Title II brought average gains of almost $1,000 annually to both adult men and women. Disadvantaged youth increased their annual earnings by an average of 15% (or about $1,000) through participation in Jobs Corps,

and youth enrollees in the San Jose Center for Employment and Training earned over $3,000 more per year than similar young people who did not enroll. Many programs have brought statistically significant gains for poor single mothers.

2) Some populations have larger net impacts than others. A large number of programs for disadvantaged youth have not succeeded in producing significant earnings gains. This is true of the short-term training provided in CETA, JTPA, and twelve out of the thirteen sites in the Jobstart demonstration. Those programs that have had success in creating long-term benefits for disadvantaged youth are either extremely well implemented (the San Jose CET program), or long-term and intensive (Job Corps).

Given the difficulty of assisting young people once they have dropped out of school, it is important to help them complete high school. There are a number of dropout prevention efforts which have cut dropout rates in high school and increased the number of youth who go on to college by impressive amounts.

On the other end of the spectrum, disadvantaged adult females are probably the population with which we have had the most demonstrated success. Almost every intervention evaluated has had at least some positive effect in helping this population, and some interventions have had a large impact. Subsidized employment approaches combined with training or support services seem to be especially successful.

3) Results from successful programs are moderate on average. The gains created by training programs are important, and represent real gains for society and for the individuals involved. But they are often not enough to accomplish the goals that are set out for them. For example, in the case of workers displaced from high-tenure jobs, on average even a year or two of successful training often does not create income gains large enough to restore earnings to their pre-displacement level. Training can blunt the impact of displacement on income, but on average training alone often does not eliminate it.

As another example, because of the low base earnings of welfare mothers, even programs with a substantial positive effect haven't greatly reduced poverty rates among participants.[141] Finally, disadvantaged males participating in JTPA adult training -- a highly cost-effective program which created significant earnings gains -- earned an average of only about $10,000 per year (1993 $) during the second year after program exit. This was more than they likely would have earned without training, and some participants had far higher earnings, but average income was still low.

4) Many employment services for displaced workers and the disadvantaged appear to be cost-effective investments. Returns to society of $1.40 or more per dollar invested have been found in reliable evaluations of JTPA training for disadvantaged adults, the Job Corps, the San Jose CET, many welfare-to-work programs, and job search assistance for displaced workers.

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[141] Supplementing these earnings gains with the expanded EITC will improve this situation.

5) It is important to make a wide variety of types of training and employment services available to workers. A variety of types of programs have shown success for workers in different circumstances. Such short-term and low-intensity interventions as job search assistance have shown positive impacts, while at the other end of the spectrum extended post-secondary training promises substantial long-run earnings gains for the minority of workers who need such training. Furthermore, both Federal training programs -- such as the Job Corps -- and training provided through local institutions such as community colleges have shown success. Conversely, failures have come in all shapes and sizes as well -- from some Federal programs for disadvantaged youth to some locally run short-term training for displaced workers.

These findings argue against a "one-size-fits-all" model and for an attempt to make wide variety of training choices more accessible to the disadvantaged, the unemployed, and those who simply need to upgrade their skills. For example, it is important to make the option of long-term training available to those displaced workers who need it. Currently, the Federal government mainly supports short-term training for such workers.

6) It often takes time for programs to begin to work. Many of the success stories in training for the disadvantaged have come from programs which were operating for 5 years or more before they were evaluated. For example, the Job Corps, JTPA, and the CET program in San Jose were all evaluated after they had been in existence a substantial period of time. The same is true of most of the successful high school dropout prevention programs. This indicates that the knowledge and experience built up through years of practice can be an important factor in determining a program's success.[142]

Some of these programs -- like JTPA and the Job Corps -- were plagued by reports of waste and inefficiency in their early years. But when evaluations were conducted after the programs had been in place for a long while, many of their problems had been fixed and they served their clients effectively.

7) Only a limited range of interventions have been tried. With a few exceptions (notably the Job Corps and Supported Work) most training programs for the disadvantaged have been short-term and not particularly intensive. In 1993, for instance, the average adult trainee in JTPA Title II, the Federal government's major training program for the disadvantaged, participated for just four months.

In addition, training programs have rarely been able to saturate a single community, and have rarely been combined with a range of other interventions directed at the same neighborhood. Improving the employment outcomes of some persons within a community can lead to "spillover effects" as other people in the neighborhood are influenced by the positive actions of their peers. (Similarly, the effects of services for a few individuals in a troubled neighborhood may dissipate because of negative spillover effects from non-participants). For example, researchers have found that youth are more likely to work or stay in school if a large

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[142] Part of this effect could be due to a tendency of more successful programs to survive longer.

proportion of their peers also do so.[143] Employment and training programs have usually reached only a few people within a given community, not enough to create such effects. There has been little experimentation with what such a saturation approach could accomplish.

8) Continued progress requires additional evaluation evidence. This paper has summarized a large number of evaluations, but there are many areas where little thorough and reliable evaluation evidence is available. For instance, there is only one reliable impact evaluation of a long-term training program for displaced workers. Little truly convincing evidence is available on the impacts of company-provided training for incumbent workers. There are also no rigorous evaluations of mentoring programs for at-risk youth.

A number of evaluations of programs for in-school disadvantaged youth are available, but the programs they evaluate have been small-scale, raising questions about whether they can be replicated. In some cases there are also questions about the design of the evaluation and the size of the sample. But given the success of the few in-school youth programs that have been tested so far, this certainly seems to be an area where large-scale demonstration programs are called for.

For some populations, such as disadvantaged high school dropouts, there is a substantial amount of research available but few models that have been tested and found to work well. For these populations, it is necessary to test new approaches and replicate the few models that have worked. For example, alternative schools can provide high school dropouts with a more intensive academic experience than they get in short-term GED preparation courses. As another example, programs which emphasize connections to the workplace and integrate academic with vocational training, such the Center for Employment and Training (CET) in San Jose, may bring greater impacts for youth. The question is whether the CET model can be successfully replicated.

It seems to us that three major priorities for future research stand out. The first is investigating the impacts of long term education and training programs for dislocated workers. A second involves programs for disadvantaged youth. There should be further examination of the impact of residential programs like the Job Corps. Researchers should also attempt to determine if the few successful models existing for disadvantaged young people, such as the San Jose CET program and the QUOP project for in-school youth, can be successfully replicated. Finally, programs to encourage or provide training to incumbent workers should be rigorously evaluated for their impact on firm productivity and worker earnings and employment.

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[143] Case, Anne and Lawrence Katz, The Company You Keep: The Effects of Family and Neighborhood on Disadvantaged Youth, National Bureau of Economic Research, 1991; Mayer, Susan "How Much Does a High School's Racial and Socioeconomic Mix Affect Graduation and Teenage Fertility Rates?" In C. Jencks and P. Peterson (eds), The Urban Underclass, Washington, D.C.: The Brookings Institution, 1991. However, it is difficult to disentangle whether these findings result from true peer impacts or a tendency of people with similar unobservable characteristics to live near each other.

Appendix Table 2 lists major ongoing evaluations of employment programs that we have been able to identify.

Evaluation literature provides guideposts for which roads to explore further and which to avoid. Though success has generally been moderate, it has been measurable. Furthermore, the gains to society produced by these programs have often been more than enough to justify their costs. Training and employment programs can serve a useful role in improving the labor market prospects and the economic security of all American workers.

Appendix Table 1: Programs for Out-of-School Youth

Program Name	Description	Sample Size and Follow-Up Period	Evaluation	Earnings Impacts	Other Impacts/Comments
70001, Ltd.	Provides job search assistance, educational services and job preparation classes to disadvantaged high school dropouts. Services are offered both before and after job placement. An average of about 80-90 hours of services were given. The program spends about $2,300 per youth, and emphasizes both job placement and education. 7001 was evaluated between 1979 and 1980.	535 participants, 440 controls. 40 month follow-up.	Matched comparison groups. Comparison groups were drawn from Employment Services offices. Results regression-adjusted.	8 month follow-up: $170*** (about 50%) more per month. Between 24 and 40 months: No significant impacts.	Also a significant positive impact on GED attainment. Comparison group design means findings should be considered approximate.
CET	The Center for Employment and Training (CET) provides vocational instruction and job placement. CET students receive four to six months of intensive training in vocational skills, with classes taught by instructors from industry. Basic skills instruction is integrated into the vocational classes. Training is followed by job placement assistance. The program was evaluated in the late 1980s.	Four-year follow-up. 167 youth, divided between experimentals and controls.	Random assignment (regression adjusted)	Total over first four years after program enrollment: $7342*** (33%) earnings increase. Total over third and fourth years after program enrollment: $6547*** (53%) earnings increase	In another experiment, CET also produced significant earnings gains for single mothers.

Program Name	Description	Sample Size and Follow-Up Period	Evaluation	Earnings Impacts	Other Impacts/Comments
CETA	Major Federal training program of 1975-1980 served hundreds of thousands of youth each year. CETA services included public service employment, work experience, classroom training, and on-the-job training.	About 2,600 youth tracked for 2 years after program graduation.	Matched comparison group drawn from the Current Population Survey.	No significant impacts found for male or female youth generally.	Comparison group design means findings should be considered approximate.
Job Corps	The Job Corps is a residential program that provides intensive skills training, basic education, support services, and job placement to youth aged 16 to 21. Some 80% of enrollees are high school dropouts, and 75% have never held a job. The program takes about one year to complete, but one-third of students drop out within three months. The program was last evaluated in the late 1970s.	Four-year follow-up. Baseline: 4,334 program participants, 1,457 comparison group members. Fourth year follow-up: 2,791 participants and 1,118 comparison group members responded to survey.	Matched comparison group design. Extensive regression adjustment, including for selection bias.	Average over first 4 years after program exit: $1350 per year** (15%) earnings increase. Fourth year after program exit: $1,400**. Earnings impacts varied depending on specification of regression model, but were always positive and significant.	Significant employment increase of three weeks per year. Significant reduction in serious (felony) crime. Over a participant's lifetime, estimated social benefits are $1.46 per dollar invested Large and significant increase in GED attainment; doubled college enrollment.

Program Name	Description	Sample Size and Follow-Up Period	Evaluation	Earnings Impacts	Other Impacts/Comments
Jobstart	JOBSTART provided vocational training, basic education, and job placement to high school dropouts with low reading skills at about 13 different sites. Average duration in the program was 7 months, and attendance was part-time. The experiment took place between 1985 and 1988.	Four-year follow-up. 988 experimentals; 933 controls.	Random assignment	Total over first 4 years after entry: $214 (1%) increase in earnings. 4th year after entry: ---whole sample: $410 (8%) earnings increase. ---Men w/ previous arrest: $1,560** (37%) increase.	Significant reduction in arrest rates - from 12.6% for controls to 10.1% for experimentals - during program period. But by the 4th year arrest rates were equal for experimentals and controls. Significant increase in GED attainment.
JTPA	JTPA is the Federal government's major training program for disadvantaged youth. JTPA provides on-the-job training, classroom training, and job search assistance. In this experiment, youth received an average of about 420 hours of services (except for male youth arrestees, who received 320). The experiment was conducted in 1987-89.	30-month follow-up. Total of 4,777 youth (treatment and control groups combined).	Random assignment. Assignment took place after clients selected alternate service strategies.	Total over 30 months after enrollment: ---Female youth: $230 (1%) ---Male youth non-arrestees: -$960 (-5%) ---Male youth arrestees: $7(0%) ---Female youth, classroom training: $930 (9%)	Significant increase in GED attainment for female youth. Youth received only 127 (male youth arrestees) to 182 (female youth) more service hours than the control group (who received non-JTPA services).

Program Name	Description	Sample Size and Follow-Up Period	Evaluation	Earnings Impacts	Other Impacts/Comments
Supported Work	Supported Work provided about 12-15 months of full-time employment in closely supervised productive work to high school dropouts aged 17 to 20. About 75% of enrollees were male, 96% were minority, and 50% had a criminal record. Job search assistance was provided at the end of the employment period. It operated from 1975-1979.	924 youth followed for 18 months; 506 youth followed 27 months; 155 followed 36 months. Half controls, half experimentals.	Random assignment. Results regression-adjusted.	(Time after entry) Months 1 to 9: $4700*** (183%) earnings increase Months 10 to 18: $640 (15%) Months 19 to 27: $410 (8%) Months 28 to 36: -$860 (-12%)	Slight (non-significant) increase in arrest rates for program participants, even during program employment period. Employment impacts similar to earnings -- positive during program; none later.

* Significant at 10% level.
** Significant at 5% level.
*** Significant at 1% level.

SOURCES: Barnow, Burt, "The Impact of CETA Programs on Earnings", The Journal of Human Resources, Spring, 1987; Bassi, Laurie, et. al. Measuring the Effect of CETA on Youth and the Economically Disadvantaged, Urban Institute, April, 1984; Betsey, Charles, et. al. Youth Employment and Training Programs: The YEDPA Years, National Academy Press, 1985; Bloom, Howard S. et. al. The National JTPA Study: Overview of Impacts, Benefits, and Costs of Title II-A, Abt Associates, Draft, February, 1994; Cave, George, et. al., JOBSTART: Final Report on a Program For High School Dropouts, Manpower Demonstration Research Corporation, October, 1993; Grossman, Jean-Baldwin, The Evolution of Youth Employment and Training Programs, November, 1992, Public/Private Ventures; Mallar, Charles et. al., Third Follow-Up Report of the Evaluation of the Economic Impact of the Job Corps Program, Mathematica Policy Research, 1982; Manpower Demonstration Research Corporation, Summary and Findings of the National Supported Work Demonstration, 1980; Public/Private Ventures, The Impacts of Pre-Employment Services on the Employment and Earnings of Disadvantaged Youth, April, 1982; Westat Inc., Continuous Longitudinal Manpower Survey: Summary of Net Impact Results, U.S. Department of Labor, April, 1984.

Appendix Table 2 – Some Major Upcoming Evaluations

Policy Area	Organization	Evaluation	Description/End Date
In-School Youth	U.S. Department of Labor; Mathematica Policy Research	Alternative Schools Demonstration	The study will determine the effectiveness of alternative schools operated by public school districts in serving at-risk youth. To be completed in 1999.
In-School Youth	Public/Private Ventures	Big Brother/Big Sister Evaluation	This random assignment study examines the impact of mentors provided by the Big Brother/Big Sister program on school performance and crime. Preliminary results available Summer, 1995.
In-School Youth	U.S. Department of Education; Mathematica Policy Research	Dropout Prevention Demonstration	A randomized evaluation of several strategies for preventing high school dropout among disadvantaged youth. Preliminary results available in 1995.
In-School Youth	U.S. Department of Education; U.S. Department of Labor; Manpower Demonstration Research Corporation (MDRC)	High School Career Academy Evaluation	This study will examine whether career academies produce impacts on student daily school attendance, school performance, credits earned, and graduation rates. Ten high schools and 1,300 students will e examined. Initial impact findings are expected in 1996.
Out of School Youth	U.S. Department of Labor; Mathematica Polcy Research	Job Corps Random Assignment Evaluation	This national evaluation of Job Corps will randomly assign 20,000 students to treatment and control groups. Study to be completed in 2000.
Out of School Youth	U.S. Department of Labor; Abt Associates	Youth Service Corps Evaluation	The study will evaluate the impact of public service corps for youth on eventual outcomes. Five youth service corps will be evaluated, and about 200 youth in each corps will be examined. Results in will be available in 1998.
Teen Parents	Ford Foundation; U.S. Department of Labor; Manpower Demonstration Research Corporation	New Chance Evaluation	A randomized test of a project which provides comprehensive services, including adult education, health services, and job placement, to 1,600 young women on AFDC. Preliminary results have already been released; long-term results are due in 1996.

Teen Parents	U.S. Department of Health and Human Services; Mathematica Policy Research	Teen Parent Evaluation	An evaluation of a project which requires teen mothers entering AFDC to work, go to school, or enter job training. Preliminary results available; long-term results in 1996.
Welfare Recipients	U.S. Department of Health and Human Services; U.S. Department of Education; Manpower Demonstration Research Corporation	JOBS Evaluation	A national evaluation of the JOBS program. Over 55,000 individuals were randomly assigned to tratment and control groups. The evaluation will measure the effect of JOBS on employment, earnings, welfare receipt, and the well-being of children over a four-year follow up period.
Disadvantaged Adults and Youth	U.S. Department of Labor; Abt Associates	National JTPA Study	A randomized study of the effectiveness of the JTPA program. 30-month results have already been released; 60-month results will be released in 1996.
Displaced Workers	U.S. Department of Labor	Job Search Assistance Demonstrations	A randomized test of the effectiveness of different job search assistance techniques. Workers will be require to participate in either less structured job search workshops, more structured ones, or job search workshops plus training. Preliminary results available in 1996.
Displaced Workers	U.S. Department of Labor, State of Maryland	Maryland Work Search Experiment	A randomized study of the impacts of different job search requirements on workers receiving unemployment insurance. Impacts of reemployment, wages, and UI benefits will be examined. Four work search requirements will be examined, which vary in their strictness and the amount of support services provided to participants. ranging from less to more strict. Results in 1997.

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