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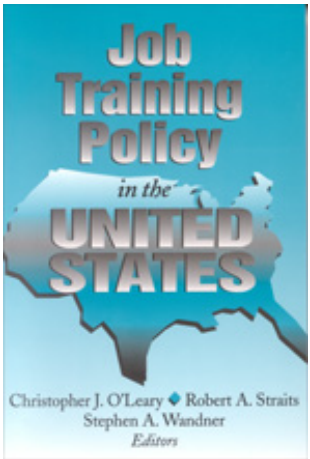
The Effectiveness of Publicly Financed Training in the United States:
Implications for WIA and Related Programs



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The Effectiveness of Publicly Financed Training in the United States

Implications for WIA and Related Programs

Christopher T. King

The principal focus of this chapter is publicly financed, subbaccalaureate education and training in the United States. I first discuss the context within which training is provided in the United States. I then examine the nature of publicly financed training and review the evidence on the effectiveness of various types of training for key target populations of interest, emphasizing the results from experimental evaluations. I conclude with a series of observations, implications, and lessons for U.S. training policies and programs, with emphasis on the Workforce Investment Act (WIA) of 1998 that is expected to be reauthorized by Congress.

TRAINING IN CONTEXT

Training comes in many different shapes and forms and is provided in many different ways. Gary Becker (1975) made the important distinction between general and firm-specific training. General training provides the trainee with skills that apply to many employers in the labor market, while specific training mainly offers skills that have value within a given firm or for a given employer. The presumption is that individuals (or government) should finance more of the former, while employers should support more of the latter, since they are its principal beneficiaries.

Many of the offerings at educational institutions, especially community and technical colleges, can be considered training, although much of it may be intended for other purposes. The late George Kozmetsky, founder and chair emeritus of the University of Texas at Austin's IC^2 Institute, made the further distinction between education as knowledge for understanding and training as knowledge for value in the market.

We can categorize training by its primary objective, as follows:

- *Qualifying training* that is intended to prepare and qualify individuals for jobs.
- *Skills maintenance and upgrading training* that is intended to maintain or improve workers' performance on the job, assist them in building new skills for retention and career advancement, and generally enhance their earnings potential in existing or new jobs.

Human capital investment in the United States tends to be focused disproportionately on qualifying training—initial preparation for work (Ganzglass et al. 2000). On a macro level, investing in training can also be viewed as part of a larger strategy to bolster national economic competitiveness (see, for example, Commission on the Skills of the American Workforce 1990; Marshall and Tucker 1992; Secretary of Labor's Commission on Workforce Quality and Labor Market Efficiency 1989).

Training can take many different forms. It can be *formal* and highly structured. Alternatively, it can be *informal* and very unstructured, occurring as part of the regular ongoing workplace processes. Institutional or classroom training is one of the more typical mechanisms for providing formal training and is often contrasted with on-the-job training (OJT), under which employers may receive a public subsidy to offset the costs of providing structured training to workers. OJT is a relatively structured form of learning by doing. In the early days of manpower training, public offerings under the Manpower Demonstration and Training Act of 1962 supported institutional training and OJT, as well as training that combined them in varying mixes. Apprenticeship training is one of the older and more intense forms of training under which workers receive both formal and informal training in conjunction with unions. In the past few decades, there has been growing

emphasis on what is referred to as customized training, publicly financed training designed and offered in close collaboration with and for employers (Isbell, Trutko, and Barnow 2000).

We can also classify training by skill level. In the 1990s, training began to focus more on basic skills—e.g., reading, math, teamwork, learning-to-learn—as well as occupational skills. This trend toward basic skills training was in response to growing recognition that employers were seeking workers who were ready to be trained more so than workers with particular skill sets (Secretary of Labor's Commission on Achieving Necessary Skills 1990).

And, workers secure training from many sources. Surveys of employers and employees indicate that employers expend considerable time and resources on training, both formal and informal, for their workers (Frazis et al. 1998). In fact, the amount of training provided by employers dwarfs that provided with public support: expenditures on training by employers, public and private, may approach $80 billion or more annually by some estimates (American Society for Training and Development 2002). According to the recent review by Lerman, McKernan, and Riegg (2004), employer-provided training has been increasing in all of the surveys that measure such activity. For example, data from the Survey of Income and Program Participation (SIPP) indicate that the share of workers 18–64 years of age reporting receipt of employer-provided training rose from only 6 percent in 1984 to 20 percent in 1996. Note that the range of estimates tends to be wide and is sensitive to the definition of employer training and the sample: Lerman, McKernan, and Riegg (2003, p. 11) offer a lower-bound estimate of 26 percent from SIPP that asks most workers about most recent training of an hour or more, and an upper-bound estimate of 70 percent from the Survey of Employer-Provided Training (SEPT) that asks workers in large establishments about the receipt of short (five minutes or more) formal training.

Finally, the incidence of formal training tends to be higher in larger establishments that have lower rates of employee turnover and offer more extensive employee benefit packages. The 1995 SEPT was restricted to private establishments with 50 or more employees. Citing U.S. Bureau of Labor Statistics figures, Lynch (1994a) states that only 11 percent of workers in small establishments reported receiving training, compared to 26 percent in large establishments. In addition, data

from the National Household Survey of Education indicate that young workers (aged 17–35 years) not currently enrolled in school have been participating in part-time training at an increasing rate and are more likely to do so the higher their level of formal education (Hight 1998). This is an important general phenomenon: compared with lower-skilled workers, higher-skilled workers tend to have greater access to training and have higher rates of training participation than lower-skilled workers (see, for example., Carnevale and Desrochers 2000; Mangum 2000), as do workers with higher levels of general skills and education, white workers, and male workers (Lerman, McKernan, and Riegg 2003). The incidence of training in the United States is low compared to other developed countries (Lynch 1994b).

RECENT TRENDS IN TRAINING EXPENDITURES, PRIVATE AND PUBLIC

Depending on which source we rely on, it appears that expenditures on training have been either rising or falling of late. On the one hand, Lerman, McKernan, and Riegg (2003) report that employers have been training an increasing share of employees in the past two decades and are spending more than the one percent of payroll on training that was recommended over a decade ago by the Commission on the Skills of the American Workforce (1990). According to Lynch and Black (1998), the majority (57 percent) of firms report increasing the amount of training offered in the early 1990s. In addition, the American Society for Training and Development (ASTD) reports that employers have been expending increasing amounts on training (ASTD 2002) through the 1990s and into the early 2000s. Its *2002 State of the Industry Report* states that total training expenditures increased both on a per-employee basis (to $704 in 2000) and as a percentage of annual payroll (to 2.0 percent in 2000). Training expenditures were projected to increase in both 2001 and 2002. However, ASTD relies on member surveys for such data, and its membership is comprised of larger employers that are more favorably disposed to training than the universe of U.S. employers.

On the other hand, other researchers report that aggregate *real* expenditures on training by employers and government programs have been declining. King, McPherson, and Long (2000, pp. 276–277) state that "[s]ince 1960, federal expenditures on all forms of workforce development have never exceeded 0.85 percent of gross domestic product or 2.4 percent of federal budget outlays."[1] Real federal training and employment expenditures peaked at more than $22 billion in 1980 (including large sums for public service employment), but fell to just under $8.2 billion by 1985 and have remained in the $7–$8.5 billion range since, or about the same as 1970's $7.3 billion figure (all expressed in 2001 dollars). However, workforce spending per labor force member peaked in the late 1970s and early 1980s at less than $250 and has hovered near $50 in the last few years, a level roughly one-quarter of that two decades earlier in the face of an increasingly dynamic and uncertain labor market (King et al. 2000).

Some forms of public support for education and training have increased noticeably in recent years. Pell Grants and other student aid, especially in the form of loans to students and their families, have risen sharply. "Pell Grants and other student assistance from the federal and state governments account for a growing share of the total resources devoted to work-related education and training, as well as higher education" (King 1999, p. 64). Real federal expenditures on training and employment programs and all forms of student aid (grants and loans) were approximately the same in 1970 at around $7.3 billion, and each had risen to more than $22 billion by 1980. But, by 1985, real student aid expenditures had increased to three times those on training programs ($24 billion versus $8 billion) and by 2000, real student aid expenditures were more than five times federal workforce program spending (nearly $37 billion v. almost $7 billion). This is part of a large and significant shift from place-based to people-based funding for training.

TRAINING: A "HOT-BUTTON" POLICY ISSUE

In the past 10 years, training has become a "hot-button" policy issue at all levels. Early impact findings from welfare employment pro-

grams in California (e.g., Riverside Greater Avenues for Independence, or GAIN) suggested that less costly strategies emphasizing work over training—so-called "work-first" approaches stressing labor force attachment (LFA)—were more effective than those stressing more traditional human capital development (HCD). The debate over whether to stress LFA versus HCD spilled over from the welfare reform arena into workforce development generally with the passage of WIA in 1998. Some of the larger states, including Florida, Michigan, and Texas, had already begun reorienting their workforce development strategies toward a work-first model well before the passage of WIA, some as early as 1995 (Grubb et al. 1999).

WIA mandates a sequence-of-services model in which training can be viewed as the "service-of-last-resort" by states and localities. Adults and dislocated workers participating in WIA generally are expected to proceed through core and intensive services before becoming eligible to receive training. Only job seekers who are still unable to secure jobs that allow them to become economically self-sufficient with the assistance of less costly core and intensive services are supposed to gain access to training. Early emphasis by the U.S. Department of Labor (USDOL) and many states and localities on less sophisticated variants of work-first appears to have given way more recently to mixed LFA/HCD strategies and discussion of worker access to support services on the job, including training, as well as child care and other services (e.g., Martinson and Strawn 2002).

PUBLICLY FINANCED TRAINING IN THE UNITED STATES

Major changes have taken place in publicly funded training programs. The main program administered by USDOL has evolved from the Comprehensive Employment and Training Act (1973–1982) and the Job Training Partnership Act (1983–1998) programs to the Workforce Investment Act (1999–present). Each has had a different orientation and stressed different service strategies for different target groups. Each also has placed primary responsibility for workforce policy-making and service delivery with a different level of government. WIA emphasizes a stronger state role in policymaking and encourages priva-

tization of services that have traditionally been the domain of local governments (see, for example, O'Shea and King 2001).

Other important training programs include: TANF work-related programs serving welfare recipients; the Food Stamp Employment and Training (FSE&T) program; Adult Education and Literacy programs; secondary and postsecondary Vocational Education; Vocational Rehabilitation; the Employment Service providing labor exchange services for all jobseekers under the Wagner-Peyser Act; and, until 2003, the H1-B training program offered training for U.S. residents that are in selected occupations that are the object of employers' H1-B visa applications that fund the program. Table 3.1 provides funding and related information for the major federal employment and training programs.

In addition, 42 states have state-financed training programs (Duscha and Graves 1999), supported by either diverted Unemployment Insurance (UI) taxes—California's Employment and Training Panel (ETP) is the oldest and largest of these—or state general revenue, e.g., the Texas Skill Development Fund. State training funds tend to support training provided directly by employers or through community and technical colleges. These funds extended to more states and grew in size in the 1980s and 1990s but encountered hard times in the 2000–2001 recession, when state UI trust funds fell to levels at which dollars flowing into training funds dried up. Few rigorous evaluations have been conducted to demonstrate the effectiveness of training conducted under them.[2]

These programs—many of which now are either administered by workforce boards and other entities but co-located in one-stop centers or administered directly through the auspices of the local boards—can offer jobseekers a broad array of activities and services; the tendency since the late 1990s, however, has been to provide mainly low-intensity, LFA services, e.g., job search assistance. One typical, medium-sized workforce board in Texas, a state with relatively integrated state and local workforce services ranging from WIA and TANF to Food Stamp E&T and even child care, exhibited the following training shares for participants under its major funding sources in fiscal year (FY) 2001: WIA, 30 percent training; TANF, 7 percent training; and Food Stamp E&T, 0 percent training.[3] Ron D'Amico, in Chapter 4 of this volume, reports similar national figures for WIA adults and dislocated worker participants exiting in program year 2000: 32.3 percent

Table 3.1 Major Federal Training and Employment Programs

Program	Appropriations (FY 2002)	Target groups	Major activities and services
WIA	$5.7 billion (including $1.46 billion for Job Corps)	Adults, dislocated workers, and youth	Core, intensive and training services with training often as a 'last-resort' for adults and dislocated workers
TANF Work Programs	State discretion within the $16.5 billion TANF Block Grant	Welfare recipients and their families	Job search and related services, some training
Food Stamp E&T Program	$110 million	Food Stamp recipients and their families, esp. able-bodied adults without dependents (ABAWDs)	Limited services, mainly labor exchange, job search, very limited training
TAA, NAFTA-TAA	$416 million	Trade-affected workers	Financial assistance and training
H1-B Training	$140 million	U.S. workers pursuing fields experiencing high visa applications	Skills training in high-demand occupations
Adult Education & Literacy	$613 million	Adults with basic skills deficiencies	Basic reading, math and literacy services
Vocational Education	$1.3 billion	Secondary and postsecondary students	Career and technical education, including Tech Prep
Vocational Rehabilitation	$2.9 billion	Individuals with disabilities needing assistance to secure and retain work	Financial assistance, rehabilitation, education and training services
ES/One-Stop Grants	$987 million	Employers and jobseekers, including UI recipients	Labor exchange, LMI, counseling and related services

NOTE: WIA = Workforce Investment Act of 1998; TANF = Temporary Assistance for Needy Families, work-related program under the Personal Responsibility Act of 1996; FSE&T = Food Stamp Employment and Training program, under the Food Security Act; TAA, NAFTA-TAA = Trade Adjustment Assistance and North American Free Trade Agreement TAA serving trade-affected workers; ES = Employment Services under the Wagner-Peyser Act of 1933.

WIA adults in training, and 39.6 percent WIA dislocated workers in training, while comparable figures for JTPA carry-over participants in WIA were 73.6 percent and 65.8 percent, respectively.[4]

It should be noted that there are many shortcomings in the new WIA data collection and reporting systems, i.e., the WIA Standard Reporting and Data (WIASRD) system, that will make it very difficult to know with any degree of certainty just what is actually being provided under the program, for whom and with what success.[5] WIASRD allows states and localities wide discretion in terms of when to register or enroll participants in activities and also creates perverse incentives for doing so by only having participants count toward performance accountability if they are registered. Many local boards are delaying the point of enrollment to ensure that their participants will be recorded as "successful." In addition, workforce boards in states such as Michigan, Texas, and Utah that have authority and responsibility for a broad array of funding streams may not show up in WIASRD as having received WIA "core" (e.g., job search assistance) services, since these might be funded under Wagner-Peyser or TANF. Real differences among areas may be difficult to determine.

HOW EFFECTIVE IS TRAINING?

A number of researchers have summarized the literature on training, producing syntheses of what we do (and do not) know about the provision and effectiveness of publicly financed training. USDOL even conducted its own review (USDOL, Office of the Chief Economist 1995). Barnow (1987) critically reviewed the evidence on CETA program impacts on employment and earnings, pointing out that the quasi- or nonexperimental evaluation methods that were employed in assessing CETA had created serious ambiguities.[6] He concluded that, while the programs appeared to raise earnings by $200 to $600 (in 1987 dollars)[7] for all participants, there was wide variation across the studies, including several that produced negative results for subgroups (e.g., youth and males). He found that estimated earnings impacts also varied widely by training activity, with the highest impacts generally associated with participation in Public Service Employment (PSE)[8] and

OJT—with impacts exceeding $1,500 in 1987 dollars (or more than $2,330 in 2001 dollars)—and the lowest with Work Experience, an activity that was generally reserved for the most disadvantaged participants (Barnow 1987, Table 1, pp. 160–161).

This discussion focuses only upon experimental evaluations of training for several key groups that have been the object of attention by federal and state government efforts for decades: disadvantaged adults and youth; dislocated workers; and welfare recipients. It both draws upon earlier evaluation syntheses as well as distills findings from recently completed experimental evaluations. It stresses *per-participant earnings impacts* as the primary outcome of interest, with all impacts and associated costs (where available) converted into current (2001) dollars.

The rationale for relying exclusively on experimental evaluations is straightforward. Despite enhancements in quasi-experimental methods for evaluating training programs in recent years (e.g., Heckman, LaLonde, and Smith 1999; Hollenbeck 2002), the most reliable and credible evidence of the impacts of training comes from well-designed and structured experiments relying on randomly assigned treatment and control groups. This was recognized by the 1985 Job Training Longitudinal Survey Research Advisory Committee, which was chaired by Ernst Stromsdorfer (1985), who was instrumental in shaping approaches to evaluating education and training programs in the United States starting in the 1960s. The committee recommended that USDOL redirect its resources to conducting experimental training evaluations, resulting in the National JTPA Study that ran from 1985–1993 (Bloom et al. 1997; Orr et al. 1996). A number of studies—Barnow (1987), Fraker and Maynard (1987), LaLonde (1995), and Friedlander, Greenberg, and Robins (1997, 2000)—all reached essentially the same conclusion. Thus, findings reported here are based primarily on evidence derived from evaluations based on experimental rather than quasi- or nonexperimental designs.

Presentation of per-participant rather than per-assignee impacts is a matter of discussion among evaluation researchers. The issue arises because, despite the use of random assignment to treatment and control status, not all of those assigned to a given treatment—for example, classroom training or OJT/Job Search Assistance (JSA) in the National JTPA Study—actually received it. Not surprisingly, per-assignee

impacts are generally lower than per-participant or per-enrollee ones. The results presented here are per-participant impacts, where possible, emphasizing earnings impacts for those actually receiving services rather than those merely assigned to them.

The final issue to be addressed before turning to training impacts is the appropriate basis for comparison, termed the counterfactual. In many evaluations of training and related social interventions, the standard counterfactual is that control group members receive no services, while treatment group members do. In fact, the more realistic counterfactual, is that control group members may receive whatever education, employment, and training services are generally available to the community, just not those specifically funded by the program being evaluated. This is the stance adopted for the National JTPA Study, the Job Corps evaluation and a number of other major evaluations conducted since the mid-1980s. That is, what is being estimated is the *incremental* impact of training over and above the effects of services that are readily available in the community.[9]

Disadvantaged Adults and Youth

LaLonde (1995) reviewed experimental as well as quasi-experimental evaluations, focusing on CETA, JTPA, and other federal training programs, including those for welfare recipients. He began by establishing realistic expectations for the impact of training on earnings:

> Given that existing public sector sponsored employment and training programs usually are less intensive and expensive than an additional year of schooling, it would be surprising if they generated larger earnings increases. Instead, we should expect that most JTPA programs, which usually cost several hundred to a few thousand dollars per participant, would generate annual earnings gains of perhaps several hundred dollars. (p. 156)

A year of education was associated with an 8 percent earnings gain, or around $2,200 per year (in 2001 dollars). He summarizes the consensus on earnings impacts of training for adults and youth as follows (LaLonde 1995, pp. 158–161):

- Various services raise the postprogram earnings of disadvantaged adult women, but have mixed or no effects on those of adult men

or youth. Moreover, earnings gains for women tend to be "modest in size, persist for several years, arise from a variety of training strategies, and are sometimes achieved at remarkably little expense."

- There is less evidence on the value of classroom training (CT) and OJT, and the evidence that does exist is mixed.
- The results for adult males are less than encouraging.
- The National JTPA Study offers no evidence that relatively less disadvantaged youths participating benefited from the low-cost training provided.

Friedlander, Greenberg, and Robins (1997) expand upon LaLonde's conclusions based on their extensive review of both quasi-experimental and experimental evaluations of programs that they sort into services that are voluntary and mandatory for participants. Table 3.2 provides updated impact estimates (all expressed in 2001 dollars) for many of the evaluations they reviewed. Their major conclusions on the effects of voluntary training programs include the following:

- "Consistently strong evidence has accumulated that government training programs have been effective for adult women. The experimental estimates of JTPA's effects on earnings are positive and statistically significant, and the rate of return on cost in JTPA is large even in the short run . . . Nevertheless, . . . such earnings effects are not large enough to lift most families out of poverty" (p. 1833).
- Average earnings effects for adult men in JTPA were as large as those for women and also produced high rates of return even in the short run. "The JTPA finding for men, therefore, represents a significant break with the results of past evaluations" (p. 1834).
- "Evidence has been accumulating for a number of years that training programs have been ineffective in producing lasting earnings effects for youth . . . The experimental estimates from the JTPA evaluation … are small and bracket zero . . . Moreover, no significant positive earnings effects were found for either male or female youth in any of the three program activity clusters or 39 subgroups examined by the JTPA evaluators" (pp. 1833–1834).

Table 3.2 Experimental Training Impacts on Participant Earnings for Major Programs and Demographic Groups

Demographic group and program	Mean annual effect ($)	Range of effects (if more than one) ($)	Net training cost per participant ($)
Adult men			
JTPA	1,249		1,371
OJT/JSA	1,641		1,699
CT	1,329		1,509
NSW demo	539	517–566	17,284
Adult Women			
JTPA	1,236	993–1,420	1,931
OJT/JSA	1,490	892–2,876	1,363
CT	533	407–641	2,704
MFSP demo	1,021	139–2,217	7,573
Youth			
JTPA	–220	–932–237	2,583
NSW demo	346	26–666	16,849
JOBSTART demo	712	546–744	8,305
New chance demo	–380		—
Job Corps (2001) (Year 4 Impacts)	1,335 All participants 1,438 Males 1,245 Females	–912 Hispanics –3,348 Nonresidents	19,161
Dislocated workers			
Texas Worker Adjustment demo	1,108 Men 1,889 Women	7–774 –86–790	782 JS only, low-cost site; 5,292 JS + training, high-cost site
New Jersey UI Reemployment demo	773 JSA Only –1,549 JSA, plus Training –172 JSA plus reemployment bonus		—
Welfare recipients			
NSW demo	1,685	713–2,657	19,626
H-HH Aide demo	2,380	269–4,827	12,541
Maine TOPS	1,864		2,933

(continued)

Table 3.2 (continued)

Demographic group and program	Mean annual effect ($)	Range of effects (if more than one) ($)	Net training cost per participant ($)
WIN-JS/WE demo	245 Adult men 564 Adult women	 –72–1,047 Women	1,442 Men 532 Women
WIN-Mixed demo	577 Adult men 937 Adult women	 914–960 Women	1,481 Men 1,730 Women
Food Stamp E&T	–111		223
NJ GD demo	1,412		1,120
JOBS	–36 Adult men 572 Adult women	–577–2,052 Men 113–1,474 Women	2,767 Men 2,492 Women
JTPA Adult Welfare	1,205		1,587
OJT/JSA	3,520		—
CT	825		—

NOTE: All results based on experimental designs and reported for the *second* postprogram year, where available. Welfare program participation largely, but not entirely, mandatory. All earnings impacts and costs expressed in 2001 dollars. For range of effects (no. negative and statistically significant results/no. negative and not statistically significant/no. positive and statistically significant/no. positive and not statistically significant). — = data unavailable; OJT/JSA = OJT or job search assistance as JTPA primary services; CT = classroom training as JTPA primary service; H-HH Aide = Homemaker-Home Health Aide demonstration with paid work experience plus training; TOPS = Targeted Opportunities in the Private Sector with OJT, unpaid work experience; MFSP = Minority Female, Single Parent demo with CT, OJT; JOBSTART = demo with CT; New Chance = CT, paid/unpaid work experience; Job Corps = intensive CT, residential and nonresidential; WIN-JS/WE = national and demonstration with job search, unpaid work experience; WIN-Mixed = mix of job search, unpaid work experience, CT; JOBS = Job Opportunities and Basic Skills program with job search, unpaid work experience, CT; Food Stamp E&T = job search; NJ GD = grant diversion demo with OJT; and NSW = National Supported Work demonstration with paid work experience plus training.

SOURCE: This table updates Tables 1–4 in Friedlander, Greenberg, and Robins (1997), incorporating results from Bloom (1990), Leigh (1995, 2000), Nudelman (2000), and Schochet et al. (2001).

- "Skills development is often implicitly associated with the intensity and cost of an activity, with greater skills development seen as requiring greater effort by participants and greater costs to programs . . . In our view, the evidence is mixed. A link between increased cost and intensity of training and greater earnings effects has not been firmly established" (p. 1834).
- "The absence of long-term follow-up in most studies is a critical problem in assessing the effectiveness of lengthy and costly skills development activities. The limited evidence available (e.g., Couch [1992], U.S. General Accounting Office [1996]) suggests that earnings effects may persist" (p. 1836).
- "At present, the most important unresolved issue concerning voluntary training programs for adults is the efficacy of various policy tools intended to increase program scale by increasing the number of participants and the intensity and expense of the activities provided to them" (p. 1837).

With respect to mandatory training programs, Friedlander et al. (1997) conclude that the evaluation evidence is strong and consistent, including the following findings:

- Most of the earnings effects for mandatory programs are positive and are larger for women than for men (p. 1839).
- The evidence in favor of more intensive and expensive skills development to increase skills and near- and longer-term earnings is mixed (p. 1840).

We now have long-term results available for JTPA from USDOL/ETA and the Job Corps evaluation findings, both of which significantly bolster our understanding of training impacts for disadvantaged adults and youth.

Long-Term JTPA Impacts

Orr et al. (1996) and Bloom et al. (1997) published the findings from the National JTPA Study that ran from 1986 to 1993. These were augmented with additional follow-up data collected by USDOL in a report published by the U.S. General Accounting Office (1996). USDOL has now collected and tabulated additional follow-up data for National JTPA Study participants as well, including up to seven years

of postrandom assignment Social Security Administration earnings records across all 16 of the original service delivery areas.[10]

USDOL estimated annual per-assignee earnings impacts for seven years following random assignment for adult men, adult women, youth, and welfare recipients by recommended service strategy. The three JTPA service strategies were: CT, the primary service recommended; OJT/JSA, where either OJT or job search assistance were the primary services recommended; and Other, which was a catch-all strategy where neither CT or OJT/JSA were the primary recommended strategies. Impacts were also disaggregated for those with and without significant prior work experience. Selected *per-enrollee* impact results for disadvantaged adults and youth include:[11]

- Adult women exhibited positive earnings impacts in all seven years for which data are available, with a per-enrollee impact for the entire seven-year period of $3,206 (5 percent); impacts were statistically significant in the first four years. Impacts were concentrated among women enrolled in OJT/JSA and Other, with impacts of $4,933 (7 percent) and $6,031 (9 percent), respectively.
- Adult men did not fare as well. Overall per-enrollee earnings impacts for adult men were positive for the seven-year period ($1,268, or 1 percent) but not statistically significant. This was true for all service streams as well.
- Female youth had positive but insignificant earnings impacts in each year of the period, with an overall per-enrollee earnings impact of $1,640, or 3 percent.
- Male youth experienced negative but insignificant earnings impacts in each year, with an overall per-enrollee earnings impact of –$3,167, or 4 percent. This continues the pattern reported in earlier JTPA analyses by Orr et al. (1996) and Bloom et al. (1997).

Figure 3.1 shows these longer-term per-enrollee earnings impacts by service strategy for adult males and females.

National Job Corps Program

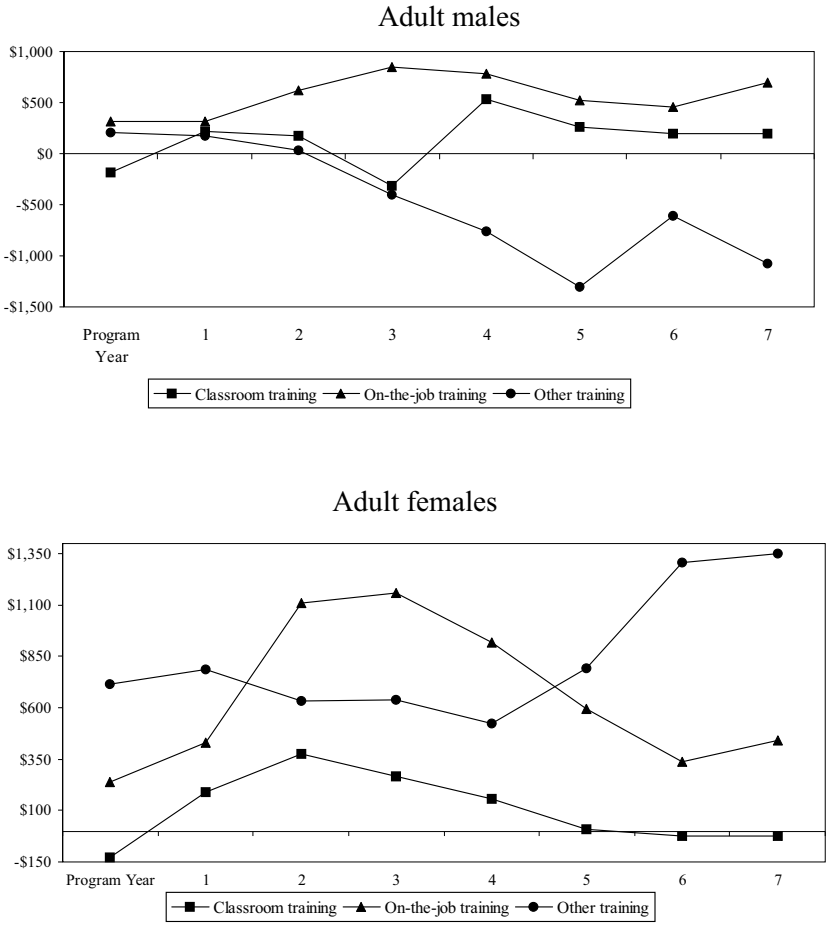
Job Corps, the most stable and intensive program serving extremely disadvantaged youth, has been operating since 1964 and has sites spread all across the country. In 2001, Mathematica Policy Research completed an exhaustive experimental evaluation of the national Job Corps program for USDOL based on an experimental design (see Burghardt and Schochet 2001; Burghardt et al. 2001; Gritz and Johnson 2001; McConnell and Glazerman 2001; and Schochet, Burghardt, and Glazerman 2001).[12] Of the 80,883 youth who applied and were found eligible for Job Corps between November 1994 and February 1996, 9,409 were randomly assigned to the treatment group and 5,977 to the control group. The treatment group included some eligible youth who did not enroll in or receive Job Corps services.[13] Control group members were not permitted to enroll in Job Corps but could access similar services available in their communities.

Demographic data for all study participants were obtained from program records as well as baseline interviews that were conducted shortly after random assignment. Follow-up interviews were conducted with participants by telephone after 12, 30 and 48 months to determine participants' employment-related experiences. Long-term analysis was based on information from the 6,828 program and 4,485 control group members who completed the 48-month interview.

Among the key findings from the Job Corps evaluation are the following (see Table 3.3):

- Job Corps dramatically increased both participation in and near-term outcomes from education and training programs across a variety of measures, with the exception of attaining high school diplomas.
- Impacts on employment rates, hours worked, and earnings per week were significantly negative after the first five quarters, then leveled off and became positive after the second year.
- Program group members earned an average of $16 per week more than those in the control group during the fourth year. Gains resulted from a combination of increased hours of work and higher wages.

Figure 3.1 Long-Term, Per-Enrollee JTPA Earnings Impacts for Adult Males and Females, by Recommended Service Strategy



SOURCE: Ray Marshall Center computations based on long-term follow-up data collected and tabulated by USDOL/ETA and activity enrollment rates provided in Orr et al. (1996).

Table 3.3 Selected Per-Participant Job Corps Impacts

Outcome	Per-participant impacts
Education/Training	
Ever enrolled in educational program (%)	28.9***
Ever attended academic classes (%)	32.9***
Ever received vocational training (%)	63.4***
Received GED certificate (%)	20.9***
Received high school diploma (%)	–3.1***
Employment/Earnings	
% employed at 48 months	4.2***
% of weeks employed, Year 1	–14.2***
% of weeks employed, Year 2	–2.9
% of weeks employed, Year 3	2.4***
% of weeks employed, Year 4	4.1***
Hours/week employed, Year 1	–5.8***
Hours/week employed, Year 2	–1.2
Hours/week employed, Year 3	1.4***
Hours/week employed, Year 4	1.9***
Earnings/week, Year 1	–$35.7***
Earnings/week, Year 2	–$1.7
Earnings/week, Year 3	$21.6***
Earnings/week, Year 4	$25.7***

NOTE: ***Statistically significant at the 1% level. Earnings expressed in 2001 dollars.
SOURCE: Burghardt et al. (2001).

- Impacts on employment rates and earnings were greater for program group members aged 20–24 years than for younger participants, but were similar across gender, residential, and behavioral subgroups. Impacts were significantly lower among Hispanics than other ethnic groups. Low impacts for Hispanics did not appear to be due to the heavy concentration of Hispanics in specific regions or the fact that English was the primary language for less than half of Hispanic participants.
- Significantly more program than control group members received employer-sponsored health insurance, paid sick leave, child care assistance, retirement benefits, dental coverage, and reimbursement for tuition or training.

Finally, note that Job Corps benefits were estimated to exceed costs by nearly $17,000 per participant if the positive fourth-year earnings impacts on earnings are assumed to continue over their working lifetimes.[14] Barnow and Gubits (2002) suggest that, while we might question the assumption that Job Corps earnings impacts will persist undiminished beyond the fourth year, the justification given by Mathematica researchers is sensible for several reasons. First, measured earnings impacts persisted over the entire period of study. Second, the additional education and training that Job Corps participants received was about the equivalent of an extra school year, the benefits of which tend to persist over a person's lifetime. Finally, the types of skills that Job Corps teaches—e.g., literacy, numeracy, workplace, and social skills—are unlikely to become obsolete.

To summarize, by most accounts, it appears that training—at least as it was structured and provided in the 1980s and 1990s—was associated with modest but lasting impacts on earnings for disadvantaged adult men and women. Further, intensive training for very disadvantaged youth as in Job Corps also yields impacts that are solid and lasting. Youth training of the sort delivered under regular JTPA programs in the 1990s does not appear to have been effective. In all cases, the counterfactual is not receiving no training but rather gaining access to other education, training, and employment services available in local communities. Estimated impacts thus represent the incremental value of training secured via JTPA (now WIA), Job Corps, and other publicly funded training and employment programs.

Dislocated Workers

Duane Leigh (1990, 1995, 2000) reviews what we know about dislocated workers, the various programs and approaches that have been developed since the early 1960s to assist them, and their effects. According to Leigh, dislocated workers, probably the most advantaged group served by publicly funded training programs, are distinguished by three interrelated characteristics: 1) they have been laid off from jobs they have held for some time, 2) they have significant work experience and firm-specific skills, and 3) they have low probabilities of being recalled to their old jobs or other jobs in the same industries. Dislocation has been and continues to be a large problem, with an average of two million full-time workers permanently displaced from their jobs annually from 1984–1992. The groups displaced have changed somewhat over time, however, with older, college-educated, white-collar workers from nongoods producing industries disproportionately affected in the latter half of the 1990s.

Experimental evaluations of dislocated worker programs have been the exception, such that our understanding of their impacts is quite limited. Only two have been conducted to date: the Texas Worker Adjustment Demonstration (1984–1987),[15] and the New Jersey Reemployment Demonstration (1986–1987). The dearth of experimental evaluations for dislocated worker services probably stems in part from the nature of the programs themselves: they are often viewed as "emergency" or "rapid" responses to immediate crises in communities rather than ongoing efforts to address industrial or labor market shifts.

The Texas Worker Adjustment Demonstration tested what was termed a Tier I/Tier II service model for a range of dislocated workers in two very different labor markets in the state (i.e., Houston and El Paso) in the mid 1980s (Bloom 1990). Tier I services consisted basically of job search assistance, while Tier II—which could only be reached subsequent to participation in Tier I—consisted of occupational skills training. In essence, the Texas demonstration sought to test an early version of "work-first-plus" for dislocated workers. More than 2,200 workers were randomly assigned to Tier I, Tier I/II and control group statuses for the demonstration across all sites. UI wage records and survey-based data provided information on their outcomes. Abt

Associates conducted the evaluation. Key impact results included the following (Bloom 1990):

- Earnings impacts for displaced women were substantial and sustained over the one-year follow-up period, although these diminished over time. In 2001 dollars, women participants earned approximately $1,890 (34 percent) more due to participation (see Table 3.2).
- Impacts for males were smaller and shorter-lived. Men posted gains of only $1,108 (8 percent) in 2001 dollars.

No additional gains were found for adding Tier II services to Tier I job search (p. 137), however, problems with implementing the design may well have precluded such impacts.[16]

The New Jersey UI Reemployment Demonstration also operated in the mid 1980s and sought to test whether the UI system could be used to both identify and serve UI-eligible dislocated workers early in their unemployment spells to accelerate their return to work. Some 8,675 UI claimants were randomly assigned to three service packages for the demonstration: JSA only; JSA combined with training (some enrollees) or relocation assistance (very few); and JSA combined with a cash reemployment bonus. Incremental impacts were computed relative to outcomes for UI claimants receiving regularly available services. Claimants were served via a coordinated service approach that brought together the UI, ES, and JTPA systems in the New Jersey sites. Mathematica Policy Research conducted the evaluation. Corson and Haimson (1995) found that:

- None of the treatments had any long-term impacts on employment, earnings, or weeks worked when measured up to six years after random assignment.
- While all three treatments had positive impacts, the JSA combined with the reemployment bonus was the only service strategy that led to statistically significant, initial increases in earnings, and these increases were modest and very short-lived, i.e., just the first quarter.
- Training—in which relatively few workers participated—had no added impact on earnings in either the near- or longer-term, although this may have been an artifact of the small numbers

enrolled. Reanalysis of earnings impacts for those actually enrolled in training indicated that participation in training—CT and OJT—did appear to enhance participant earnings.[17]

To date, we have not fully tested the impact of skills training or retraining for dislocated workers with a solidly implemented demonstration evaluated with an experimental design. In fact, USDOL initiated an experimental evaluation of dislocated worker services toward the end of the JTPA regime, but it was never completed.[18] Note that recent analyses by Jacobsen, LaLonde, and Sullivan (2001, 2002) using Washington State administrative data suggest that the returns to community college education for dislocated workers are significant and may endure for several years. However, their estimates of the returns to education and training are derived from statistical comparisons of "observationally similar" groups of displaced workers (Jacobsen, LaLonde, and Sullivan 2002, p. 203) and do not approach the precision of most quasi-experimental estimates. Absent well-designed and conducted experimental evaluations of these strategies for dislocated workers, we cannot be very confident of their impacts.

Welfare Recipients

Plimpton and Nightingale (2000) provide a comprehensive review of both experimental and rigorous quasi-experimental evaluations of 14 welfare-to-work programs that have operated in the United States since the mid 1970s, beginning with the intensive National Supported Work demonstration of the late 1970s and welfare employment efforts under the 1980s' Work Incentive (WIN) program and ending with an initial look at the labor force attachment (LFA) and human capital development (HCD) sites of the National Evaluation of Welfare-to-Work Strategies (or NEWWS). They summarize findings from these evaluations, some of which they have contributed to, focusing on impacts on employment, earnings, and welfare receipt. They report overall impacts as well as those by subgroup and service strategy. They summarize their findings as follows (p. 49):

- "Most welfare employment programs that offer low-cost, low intensity services (like job search assistance and short-term

unpaid work experience) have positive impacts on employment and earnings and in some cases reduce welfare costs.

- More comprehensive training programs offering services like supported, paid work experience and occupational training generally have larger and longer-lasting impacts.
- Even those interventions with the greatest impacts have been unable to move individuals and families out of poverty or permanently off the welfare rolls, nor have they produced economic self-sufficiency."

Nudelman (2000) analyzed a sample drawn from the National JTPA Study, consisting of 1,862 adult women (22 years of age and older) who were receiving Aid to Families with Dependent Children (AFDC) when they applied to JTPA between November 1987 and September 1989. She presents both per-assignee and per-enrollee impacts based on both UI wage records and 30-month follow-up survey data. She examines JTPA's overall net impacts on earnings and welfare receipt, impacts attained by various subgroups of recipients, impacts of various JTPA service streams, and the relationship between impact on earnings and impact on receipt of welfare. Note that, as with the larger National JTPA Study, welfare recipients were assigned to one of three main service streams: 1) CT, 2) OJT/Job Search Assistance, and 3) Other Services (i.e., a strategy that did not feature CT or OJT as the primary intended service). Impacts represent the "incremental effect of JTPA services relative to services available elsewhere in the community" (p. 104).

Before presenting her findings, Nudelman cautions that there are noteworthy differences between this group of welfare recipients in JTPA and those that have been the focus of most welfare employment evaluations in the past as well as those enrolled in current Welfare-to-Work (WtW) and TANF programs (p. 105): welfare recipients who enrolled in JTPA in the late 1980s comprised a very small share of all recipients, were usually (but not always) volunteers who were screened for program eligibility, and were not subject to welfare time limits.

Nudelman reported that:

- More than 30 months after random assignment, JTPA participation led to a statistically significant 28 percent per-enrollee earn-

ings increase for adult welfare recipients. During the second postprogram year, per-enrollee earnings increased by a statistically significant $889 (21 percent), or about $1,205 in 2001 dollars for adult welfare recipients.

- Earnings impacts persisted over the entire 30-month period and were statistically significant for most quarters. During the final two quarters, in fact, the magnitude of earnings impacts was growing noticeably for adult welfare recipients.
- JTPA participation also resulted in significant reductions in welfare receipt (about –$1,760 in 2001 dollars), although reliable data on welfare recipiency were only available for 6 of the 16 JTPA study sites nationwide.
- Per-enrollee earnings impacts over the 30-month period were largest (and statistically significant) for white and other women ($4,733), those with a high school diploma or GED ($2,145), longer-term recipients ($6,202 for those on 2–5 years and $3,912 for those on more than five years), and those who were not required to participate in JTPA ($3,149), all expressed in 2001 dollars.
- Per-enrollee impacts also tended to be greater (and significant) for women assigned to the OJT/JSA and Other Service streams: those assigned to the former earned nearly $3,520 more in the second postprogram year and almost $7,400 for the 30-month period; those in Other Services earned $5,661 more for the entire period (all in 2001 dollars). Nudelman suggests that lower impacts for CT might be explained by the short-term nature of the training offered (only 3–6 months).

With additional years of labor market outcome data, it is possible to round out this picture of longer-term impacts for adult welfare recipients in JTPA. The USDOL/ETA data provide detailed per-assignee impacts by service strategy (i.e., CT, OJT/JSA, Other) for seven years following random assignment for welfare recipients, sorted into two groups: those on welfare less than two years, and those on welfare two years or more prior to entry. Unfortunately, the USDOL data lack the strategy-specific enrollment rates for each of the designated welfare subgroups required to convert per-assignee to *per-enrollee* impacts.

Among other findings, unpublished USDOL data on per-assignee impacts indicate that:

- With a few exceptions, statistically significant earnings impacts were concentrated among long-term welfare recipients with prior work experience.
- Long-term welfare recipients experienced earnings gains from JTPA participation in all seven years following random assignment, with significant earnings gains in the first three years. Over the entire seven-year period, long-term welfare recipients experienced a 9 percent earnings gain from participation.
- Impacts varied widely by service strategy and welfare status. Long-term welfare recipients assigned to CT experienced modest to near-zero impacts. Long-term recipients assigned to OJT/JSA enjoyed substantial impacts in most years and a 12 percent earnings gain over the period as a whole; those on welfare less than two years at entry also gained from OJT/JSA, including a statistically significant 21 percent impact in year seven and 12 percent over the entire period. For those assigned to the Other Service stream, only long-term recipients enjoyed gains: persistent annual increases and 24 percent for the seven-year period as a whole, and statistically significant gains of 33–36 percent in the first and second years.
- Only welfare recipients with at least some prior work experience enjoyed earnings gains following assignment to JTPA services.

Michalopolous, Schwartz, and Adams-Ciardullo (2000) provide *per-assignee* impact results for 20 programs serving welfare recipients across the country as part of the large National Evaluation of WtW Strategies (NEWWS) being conducted by MDRC for the U.S. Department of Health and Human Services.[19] The 20 welfare employment programs included the Saturation Work Initiative Model (SWIM) in San Diego; California Greater Avenues for Independence (GAIN) programs, located in Alameda, Butte, Los Angeles, Riverside, San Diego, and Tulare Counties; LFA and HCD programs in Atlanta (Georgia), Grand Rapids (Michigan), and Riverside (California); education-focused Job Opportunities in the Business Sector (JOBS) programs in Detroit and Oklahoma City; traditional and integrated JOBS programs

in Columbus (Ohio); an employment-focused JOBS program in Portland (Oregon); Minnesota's Family Investment Program (MFIP); and finally, the Family Transition Program (FTP) in Escambia County (Florida).

Some 71,932 single-parent welfare recipients were randomly assigned to a program or control group across the participating sites. Control group members did not receive employment-related services offered under the various programs and were not mandated to participate in the programs. Thus, the NEWWS evaluation focuses on a *voluntary* program, in sharp contrast to most earlier evaluations of welfare employment programs.

Michalopoulos, Schwartz, and Adams-Ciardullo (2000) report that:

- Programs increased earnings by roughly $500 per person on average and rose for all subgroups. Earnings increased most for new welfare applicants and least for those with high risk of depression.
- Psychological and social barriers were not strongly related to earnings impacts.
- Programs reduced welfare payments by $400 per person and food stamp payments by $100 per person on average.
- Programs did not increase or decrease overall *income* for most subgroups.
- Increases in earnings were fairly constant for all levels of disadvantage, although more disadvantaged program groups had higher reductions in welfare payments.
- Programs increased earnings substantially for low-risk participants (about $800) and moderate-risk participants (about $500) but did not significantly increase earnings for the most depressed.[20]
- Among disadvantaged subgroups, program impacts were higher for those without prior work experience than for those who had not graduated from high school.

- Employment-focused programs (Portland, Riverside GAIN, MFIP, and FTP) were more effective for more disadvantaged groups.
- Programs with a mix of activities (all GAIN sites, Portland, MFIP, and FTP) helped a wider range of individuals overall.

Freedman (2000) reports on four-year employment and earnings *per-assignee* impacts from 10 of the programs evaluated by MDRC as part of NEWWS. Four of these programs—Atlanta, Grand Rapids, and Riverside LFA and Portland—were largely employment-focused, encouraging rapid entry into the labor market. Six of the programs—Atlanta, Grand Rapids, and Riverside HCD, Columbus Integrated, Columbus Traditional, and Detroit—were education-focused, striving to increase participants' skills or credentials before they looked for employment.

Some 44,569 single parents were randomly assigned to treatment and control groups over a three-and-a-half-year period. As with all NEWWS sites, members of the control group did not receive employment-related services and were not mandated to participate. Freedman's report covers roughly half of the sample (n = 27,105) for whom four-year postassignment follow-up data are available. Short- and long-term employment stability and earnings growth figures were calculated using state UI wage records. Regression was used to adjust impact estimates to account for sample members' differences in prior earnings and employment, welfare benefits received, and baseline characteristics.

Freedman found that a greater percentage of program group members in the employment-focused programs were employed during the first two years and remained employed at the end of year two than control group members. However, the results were mixed. The proportions of individuals who were no longer employed after year two or who experienced unstable employment or joblessness during years three and four were also higher. Earnings findings were also mixed.

Hamilton (2002) synthesizes the overall findings from the five-year NEWWS evaluation, reporting that:

- All NEWWS programs significantly increased single parents' employment and earnings and decreased their dependence on welfare (p. 23), although earnings effects tended to diminish dur-

ing the fourth and fifth follow-up years (p. 24). Only Portland—a *hybrid* employment/education program—and the Riverside LFA program produced significant earnings impacts in the fifth year.

- "Notably, only a minority of program group members experienced stable employment over the five years." Even after five years, most were still earning relatively low hourly wages, e.g., $7–$8 per hour (p. 24).
- "Employment-focused programs generally had larger effects on employment and earnings than did education-focused programs" (p. 28). LFA program impacts on earnings for the full five-year period ranged from $1,500 to $2,500, while those for HCD programs ranged from $800 to $2,000 (p. 29). In both instances, these are *per-assignee* impacts.
- Compared with LFA, the more costly HCD approach did not produce additional long-run economic benefits (p. 29), nor did it lead to greater earnings growth or increase the likelihood of employment in good jobs (p. 32). These results held for nongraduates as well as graduates.

It is important to note that HCD programs included in the NEWWS evaluation stressed basic and adult education much more than occupational skills training. During the five-year period, 40 percent of all participants in the HCD programs participated in adult education for at least one day, while only 28 percent participated in vocational training. Participation in vocational training, not surprisingly, was far higher for high school graduates than for non-graduates. HCD programs increased adult education participation by fully 20 percentage points, but only increased participation in vocational training by 5 percentage points (p. 17).

The most effective program emerging from the NEWWS evaluation was the Portland program, a hybrid employment- and education-focused model. Over five years, participants in the Portland site increased their earnings by 25 percent and their average number of employed quarters by 21 percent, and also experienced more stable employment and earnings growth than all of the other programs. Its distinctive features included the following: "an employment focus, the use of both job search and short-term education or training, and an

emphasis on holding out for a good job" (p. 36).[21] Portland also limited the duration of participation in some types of adult education.

Finally, Hotz, Imbens, and Klerman (2000) make an important contribution to our understanding of the duration of impacts from welfare employment and training program participation. They reanalyze long-term impacts from the four California GAIN sites that were featured in the MDRC evaluation (i.e., Alameda, Los Angeles, Riverside, and San Diego), using nine years of postrandom assignment outcomes data—the longest time period used in any random assignment evaluation conducted to date—and accounting for county-level differences in participant populations. They conclude that "work-first" programs were more successful in producing net impacts on employment, earnings and welfare reductions than "human capital accumulation" programs in the early years, i.e., one to three years after assignment. However, the relative advantage of these less expensive "work-first" interventions disappears in later years. Based on their long-term reanalysis of GAIN program impacts, Hotz, Imbens, and Klerman (2000) conclude that:

> [S]hort-term evaluation of training programs can be misleading. The relative ranking of programs is not stable over time. Simple extrapolations of early results to later results do not appear to be possible. The relation of short-term results to long-term results appears to vary with program content in ways consistent with a priori expectations. (p. 43)

Without a doubt, we know more about the impacts of various employment and training interventions on the employment and earnings of welfare recipients than any other single group. High-quality experimental evaluations of both demonstration projects and ongoing programs have been conducted over three decades in order to estimate impacts for welfare women. Fortunately for policymakers, they have yielded reasonably consistent results. First, most welfare employment and training programs evaluated over the years have led to increased employment and earnings and reduced welfare payments for welfare recipients, especially those with more education and some work experience who were longer-term (though not necessarily longest-term) recipients and who volunteered to participate. Second, while low-intensity LFA approaches worked very well in the near term, more

intensive ones tended to perform better over the long haul, especially those that stressed a mix of work and skill development. And finally, while employment and training programs have worked for all concerned—for participants, taxpayers, and society—most of the participants have remained in low-paying, relatively unstable employment. Only a small share have escaped poverty.

Before concluding, we should acknowledge just how much the context for welfare employment and training programs has changed over the time period in which these studies have been carried out. Women on welfare now encounter constrained service options (e.g., work-first) and mandates to participate under the threat of sanctions that accompany welfare time limits and personal responsibility agreements, among other important changes. They are expected to work and attain economic self-sufficiency through earnings—or possibly marriage—rather than relying on public assistance.

CONCLUSIONS, IMPLICATIONS, AND LESSONS FOR TRAINING POLICIES AND PROGRAMS

What we know about the effectiveness of training can be summarized in a few brief statements, which are based on decades of experience evaluating these programs with the most reliable method available: an experimental design with random assignment to treatment and control groups. These statements also incorporate results from major evaluations that were completed in the last two years, namely the National Job Corps Evaluation and NEWWS. In general, we know with considerable confidence that:

- Training as delivered in traditional employment and training programs produces modest incremental impacts on employment and earnings (measured relative to other services available in the community) for adult men and women. While statistically significant and often lasting for years, these impacts are insufficient to lift these individuals and their families out of poverty.
- Training as delivered in traditional programs does not result in positive employment or earnings impacts for disadvantaged

youth. Training for youth that is delivered through intensive and expensive programs like Job Corps does produce modest and lasting impacts on employment and earnings as well as strong returns on investment, although not for all groups (e.g., Hispanics and younger youth).

- Employment-focused approaches tend to produce modest, significant and near-term effects on employment and earnings for welfare recipients. The models that are particularly effective for welfare recipients are those that offer a mix of LFA and skills acquisition services (and only limited adult education) and that encourage participants to be selective in their search for jobs offering good wages and benefits and career advancement opportunities.
- HCD programs produce significant long-term (up to nine-year) impacts on employment and earnings for welfare recipients that exceed those of less costly "work-first" programs.

What lessons can we draw from these evaluation findings for WIA and other workforce-related policies and programs? Several features of WIA merit our attention (see Chapter 4 of this volume). Unlike its predecessors CETA and JTPA, WIA posits training as a "service of last resort," directing local one-stop centers to put adults and dislocated workers through a sequence of core and intensive services before referring them to providers for more expensive training services. This feature was incorporated into WIA to stress a "work-first" orientation much like that in the Personal Responsibility Act of 1996 for welfare recipients. WIA also stresses individual choice through the use of individual training accounts (ITAs), voucher-like mechanisms, to fund most training for adults and dislocated workers.[22] In addition, ITAs may only be used to secure training from providers certified by the state as eligible training providers (ETPs) based on their recent record of performance. ITAs and eligible training provider lists reflect WIA's increased reliance on market-like mechanisms. WIA has also introduced a far more competitive environment for delivering workforce services, both by mandating that workforce boards contract out competitively for one-stop center operators as well as by introducing ITAs and eligible provider provisions. Finally, WIA accountability provisions allow states and local boards discretion over the point at which an

individual jobseeker is officially registered for services and, thus, a person for whom the board is accountable. One-stop operators may delay registration until they feel reasonably confident the individual will be successful (e.g., entered employment, earnings gain). WIA has also dropped the use of a regression model to adjust performance expectations for local conditions and participant characteristics.

We can draw several important lessons for WIA and related policies. First, workforce policies and programs should stress combinations of work and training for many if not most participants. Not only are some of the largest and more durable earnings impacts associated with such interventions (e.g., the OJT/JSA service stream for JTPA and Portland's hybrid approach under NEWWS), but we also know that various forms of work-based learning, including apprenticeship and customized training, are valued highly by employers. Moreover, for participants, often the largest cost of education and training is their foregone earnings. So, emphasizing combinations of work and training appears to make sense from all perspectives. A corollary to this lesson is that simplistic work-first, any-job-is-a-good-job approaches that push participants into jobs without access to training should be avoided.

Second, WIA's emphasis on training-as-last-resort is a good strategy only if our main goal is producing near-term labor market impacts at low cost. More recent USDOL interpretations of WIA's sequence-of-services provisions that tell states and localities to use discretion in deciding when an individual can proceed to training represent a move in the right direction. If the goal of WIA is real employment and earnings impacts over the long-term—say, 6–9 years postenrollment—then occupational skills training in the context of an employment-focused approach is the way to go. Included in a more human capital-focused strategy would be enhanced ties to community and technical colleges—what Grubb et al. (1999) refer to as "ladders of opportunity." WIA policies are currently discouraging such connections.

Third, greater reliance on market-oriented mechanisms—consumer choice, ITAs, ETP certification lists—combined with measurement focused on short-term performance and increased competition, is likely to drive WIA even more towards immediate results, low-cost services, and participant "creaming." Research conducted on JTPA programs indicated that these issues have been problematic for a while, but the

combination of these WIA provisions can be expected to make matters worse.[23] The results from the Department of Labor's ITA evaluation, now being conducted by Mathematica (See Chapter 6 in this volume), should be examined very thoroughly for insights regarding necessary policy and program adjustments to avoid undesirable effects.

Fourth, the results for Portland and related evaluation research point to a number of program features associated with longer-term labor market success. Rather than leave program design completely to market forces, WIA policy should actively disseminate these findings and encourage states and local workforce boards to adopt program designs accordingly. Key features include a strong focus on employment, combining job search and short-term education or training, and being more selective about the choice of jobs, e.g., demand occupations paying self-sufficiency wages and offering greater potential for retention and advancement.

Fifth, WIA and related programs should put more resources into postprogram services geared to promoting continued access to learning, retention and career advancement opportunities. Many of those now being served in WIA, TANF, and related workforce programs are unlikely to have the desired level of access to or participation in further education and training opportunities in the workplace without an additional push from public policy. Employers are increasing their investments in training, but training is still offered disproportionately to those at higher skill levels.

Sixth, impacts for youth are unlikely to improve under WIA unless more intensive service strategies are pursued along the lines of those found in Job Corps, which remains the only program that has yielded significant, lasting labor market impacts for youth. Job Corps is expensive, but under very reasonable assumptions, produces positive returns on investment for very disadvantaged youths. USDOL, and other responsible federal agencies (e.g., U.S. Department of Education), would do well to study the lessons from Job Corps and develop mechanisms for implementing them within the mainstream programs across the nation. While doing so, special efforts must be made to determine what works for Hispanic and younger (18–19-year-old) youth.[24]

We can also offer lessons that extend beyond WIA. One is that measuring the impacts of training, a challenge in the best of circumstances, is likely to become even more difficult in the future. Even with

training producing the desired impacts on earnings, if training is poorly measured in WIA information systems, and if control group members are accessing an ever-expanding array of Internet-based education and training services, then detecting incremental impacts relative to services received in the community at large will be very challenging. Making the case for funding effective workforce services may become more difficult.

Another lesson we should take from the Job Corps experience over several decades is that serious attention to the what and how of training pays off in the labor market for even the most disadvantaged participants. Job Corps is the only workforce development program that has enjoyed relative stability over many years, while retaining a focus on real skill acquisition with the necessary support services. It may be no accident that many of the Job Corps contractors also bring to the table experiences from the military sector, a sector that has made conscious, long-term investments in curricula, learning technologies and related tools (see, for example, Fletcher and Chatelier 2000). We should pursue ways to promote greater technology transfer on training from the military into other areas of the public as well as the private sectors.

Yet a third important lesson is that training and training-related strategies are necessary but not sufficient without well designed demand-side strategies. Even the most effective employment and training programs have tended to leave most of their participants in employment that was less than stable and earning wages that were inadequate to attain economic self-sufficiency. Public policy must pay careful attention to both sides of the labor market to be effective.

The importance of training is widely recognized (see, for example, International Labour Office 1998). Mangum (2000) refers to this as the "essentiality of occupational preparation." We now compete in a global economy with shortening production cycles, growing job insecurity and instability, and rising emphasis on personal and family responsibility for all things, including career development and management ("career navigators"). The labor market places a definite premium on education and skills such that the income and earnings gap between those who have them and those who do not continues to widen. We must use the lessons learned from program evaluations to improve the delivery of training services over time. In part, this may mean commu-

nicating them in a form that individual consumers can comprehend and act upon.

Notes

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1. King et al. (2000) rely on figures from Function 504 in the federal budget. Friedlander et al. (1997, p. 1814) state that training expenditures "broadly defined," constituted less than 0.2 percent of GDP in 1995.
2. For example, the Texas Smart Jobs Fund, which had been second in size only to California's ETP, was eliminated in 2001, a victim both of the lack of evidence of its effectiveness and of declining Texas UI trust fund balances.
3. Ray Marshall Center tabulations based on raw 2000–2001 participation data provided by the local board.
4. These figures are based on tabulations from WIA Standard Reporting and Data System.
5. I am currently participating in two USDOL-funded projects—the Administrative Data Research and Evaluation (ADARE) Project (see Stevens 2003) and the eight-state WIA Service Delivery Study that is being directed by the Rockefeller Institute (Barnow and King 2003)—that are exploring these issues and documenting WIA data collection and reporting problems.
6. Some researchers prefer the term "nonexperimental" to "quasi-experimental," on the grounds that the prefix "quasi" lends too much credence to the resulting estimates. Yet, the point of the distinction is that evaluation methods relying on various forms of comparison groups are attempting to approximate the results of experiments, while simple gross-outcome analyses that are "nonexperimental" do not. I've chosen to use the term "quasi-experimental" for this reason.
7. Note that these would translate into impacts ranging from around $312 to $935 in current (2001) dollars.
8. PSE was dropped from the federal training toolkit in the early 1980s despite showing positive (quasi-experimental) results, especially for women. Funding for PSE was eliminated from the federal budget in FY 1981. Congress eliminated

PSE as an allowable activity when JTPA was signed into law replacing CETA in late 1982.

9. Kane and Rouse (1999, p. 74) suggest that researchers have been far too conservative in interpreting JTPA training impacts, a point also made in the recent paper by Barnow and Gubits (2002).
10. I am grateful to Dan Ryan of USDOL/ETA's Office of Evaluation for providing these data.
11. USDOL's per-assignee impacts were converted into per-enrollee impacts using the activity enrollment rates provided in Orr et al. (1996) and Nudelman (2000).
12. Mathematica researchers Mallar et al. (1982) also conducted the *quasi-experimental* evaluation of Job Corps some twenty years earlier.
13. Roughly 27 percent of the applicants never enrolled in the Job Corps.
14. McConnell and Glazerman (2001), indicate that benefits exceed costs for most participant subgroups with two troubling exceptions: Hispanics and younger (18–19-year-old) participants.
15. The author served as Assistant Director of Research, Demonstration and Evaluation for the Texas JTPA program during this period and expended considerable effort to ensure that an experimental design was the basis for the Texas demonstration. An Abt Associates team led by Howard Bloom, then at New York University, conducted the evaluation.
16. Most of the Tier II referrals to training were in the Houston site, and, unfortunately, many of these were referrals of former white-collar professionals to what was seen as blue-collar training. A more appropriate test of their Tier I/II design would have been desirable.
17. Estimated earnings effects for training participation are very high: for example, second-year, per-enrollee impacts of $1,402 (insignificant) for CT and $10,987 for OJT (significant at the 99 percent level) in 1986–1987 dollars (see Corson and Haimson 1995, p. 48). Note that these estimates are based on very small numbers and are not true experimental impacts estimates. Only 15 percent of those referred to training received it, while 19 percent of those offered the reemployment bonus received it (Corson and Haimson 1995, pp. 18–19).
18. Again, thanks to Dan Ryan of USDOL/ETA for providing this information.
19. The NEWWS evaluation reports did not provide sufficient information to compute *per-participant* impacts for all groups.
20. Risk of depression was measured for sample members in Portland, Riverside, Atlanta, and Grand Rapids using four items from the Center for Epidemiological Studies-Depression (CES-D) Scale.
21. We identified many of the same features as being important factors in producing gross outcomes in a USDOL-funded research project on JTPA "success stories" in Illinois and Texas in the mid 1990s (King et al. 2000). We utilized a combination of multivariate statistical analysis of program records linked with long-term UI wage records and in-depth field interviews with program administrators and staff.
22. OJT, customized training, and a few other exceptions are allowed.
23. See Chapter 2 for a detailed discussion of these issues.

24. WIA defines two youth subgroups: younger youth (18–19) and older youth (20–24). Job Corps (part of WIA) takes the same approach.

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