

**National Evaluation
of Welfare-to-Work Strategies**

**Improving Basic Skills:
The Effects of Adult Education
in Welfare-to-Work Programs**

**U.S. Department of Education
Office of the Under Secretary
Office of Vocational and Adult Education**

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Chapter 1

Adult Education in Mandatory Welfare-to-Work Programs: Introduction, Synthesis, and Implications for Policy

I. Introduction

Since the early 1980s, welfare policymakers and program operators have debated the role of adult education in program strategies to help welfare recipients make the transition from welfare to work. The so-called Human Capital Development, or HCD, strategy focuses on providing education and increasing welfare recipients' basic academic skills and education credentials, following research evidence that these skills and credentials are prerequisites to obtaining stable employment.¹ This HCD strategy became popular especially during the mid to late 1980s. For example, the California Greater Avenues for Independence (GAIN) program, initiated in 1986 and evaluated by Manpower Demonstration Research Corporation (MDRC), provided education and training to large numbers of welfare recipients. During the same time, the federal government also placed a greater emphasis on adult education, as evidenced in the Family Support Act (FSA) of 1988, Public Law 100-485.

However, during the early 1990s, alternative program strategies gained popularity, seeking rapid job entry for welfare recipients instead of providing them with education first. Such strategies—known as Labor Force Attachment (LFA), or “work first,” strategies—are supported by research findings suggesting that quickly entering the labor force is a promising trajectory to long-term self-sufficiency.² For example, in 1995, California ended testing of literacy and math skills as welfare recipients enter the state's welfare-to-work program, thereby eliminating these tests as a way to determine who initially needs education services. This turn toward more work-focused welfare-to-work programs was reinforced by the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996, P. L. 104-193, which placed time limits on welfare receipt, making longer stays in education and training programs less attractive for program operators and welfare recipients.

However, the debate surrounding HCD programs for welfare recipients is not settled. Although LFA programs appear to be more effective than education-focused programs in the short term, there is no proof that offering job search programs to all welfare recipients (regardless of their education needs) leads to long-term self-sufficiency for a majority of the welfare caseload. A significant number of programs currently operated for welfare recipients offer education classes among their array of possible services, and such services are likely to remain important under Temporary Assistance for Needy Families (TANF), the funding structure for PRWORA.

Comparisons of HCD and LFA strategies are not a major focus of this report. Instead, this report mostly addresses key questions about *how* HCD programs in general, and adult education activities in particular, affect the educational and economic outcomes of welfare recipients. Spe-

¹Mincer, 1974; Polachek and Siebert, 1993; Sum et al., 1995.

²See, for example, Riccio et al., 1994.

cifically, these analyses move beyond overall HCD program effects and focus on participation in adult education and the effects of such participation. This is important, because many welfare recipients who are assigned to HCD programs do not enroll in adult education classes or they drop out of these classes after only a brief spell of participation. As a result, the impacts of the larger programs do not necessarily reflect the full potential of the adult education services provided to those who receive them. Learning more about how those specific services affect participants is the primary focus of this report.

Background Information: Research Design for the National Evaluation of Welfare-to-Work Strategies

This report is part of the National Evaluation of Welfare-to-Work Strategies (NEWWS)—an evaluation of programs begun under the Family Support Act, conducted by the Manpower Demonstration Research Corporation, and funded by the U.S. Department of Health and Human Services, with support from the U.S. Department of Education. The evaluation includes programs in seven sites across the country: Atlanta, Georgia; Columbus, Ohio; Detroit, Michigan; Grand Rapids, Michigan; Oklahoma City, Oklahoma; Portland, Oregon; and Riverside, California. It uses a random assignment research design to estimate the overall effects of the welfare-to-work programs being studied.

In each site, individuals who were required to participate in the program were assigned, by chance, either to a program group that had access to education, training, and other employment services and whose members were required to participate in the program or risk a reduction in their monthly welfare grant (a “sanction”), or to a control group, which received no services through the program but whose members could seek out services from the community. This random assignment design ensures that there were no systematic differences between the background characteristics of people in the program group and those in the control group when they entered the study. Thus, any subsequent differences in outcomes between the groups can be attributed to the program.

It is important to note that the programs in the evaluation were not subject to the conditions and requirements of what are currently referred to as “welfare-to-work” programs as defined under TANF. During the follow-up period analyzed in the report, individuals in the 11 studied programs did not face a time limit on eligibility for welfare assistance as they would now under TANF. All the programs, however, shared TANF’s primary goal of moving welfare recipients into paid work and off assistance. Furthermore, among the 11 programs are some which are strongly employment-focused—the welfare-to-work strategy favored under TANF—as well as some which are strongly basic education-focused. The programs varied in many other ways as well, including how broadly the participation mandate was applied to the welfare caseload and how strictly it was enforced, the amount of child care support provided for program participation or employment, and methods of case management. The programs also served different welfare populations and operated in a variety of labor markets. Lastly, it is important to point out that the programs being evaluated here are state-operated welfare-to-work programs originally developed under the Family Support Act of 1988. These programs are unrelated to the “welfare-to-work” programs currently being operated by local Workforce Investment Boards, supported by the Workforce Investment Act, and administered by the U.S. Department of Labor.

The research design for the study presented in this report often diverges from that of the larger NEWWS study. Instead of comparing randomly assigned program group members and control group members, this study often compared the experiences of welfare recipients who participated in certain adult education activities with those of recipients who did not and sought to estimate how varying degrees of participation affected education and employment outcomes. A detailed discussion of these “nonexperimental” comparisons is featured in a separate text box on page 7.

A. Purpose of This Study

The analyses presented here help answer many important policy questions surrounding adult education for welfare recipients. These questions concern (1) the quality of the education services provided, (2) the extent to which welfare recipients participate in education, (3) the extent to which welfare recipients earn education credentials, (4) the value of the education services provided, and (5) the value of basic skills and education credentials in the labor market during the mid-1990s. These issues are addressed primarily by comparing the experiences of recipients who participate in adult education with those of recipients who do not and by assessing the relative effectiveness of different *levels* of participation in adult education.

B. Overview of This Report

These analyses of how adult education works in the context of welfare-to-work programs were conducted for a large sample of welfare recipients who entered one of the 11 programs studied in the National Evaluation of Welfare-to-Work Strategies (NEWWS) *without* a high school diploma or General Educational Development (GED) certificate.³ Thus, the findings do not generalize to welfare recipients who *do* have a high school diploma but who still may be served by HCD programs that provide more advanced levels of education and training. The types of adult education examined in the report encompass adult basic education (ABE) classes, programs preparing students for the GED exam, regular high school classes, and classes in English as a Second Language (ESL). Among these, ABE and GED preparation accounted for most of the adult education in the 11 mandatory welfare-to-work programs studied. These 11 programs operated in seven sites, and each program was operated under the federal FSA and its Job Opportunities and Basic Skills Training (JOBS) program. (Program intake for this study began in June 1991 and ended in December 1994; data presented cover June 1991 through December 1997. See the accompanying box for further information about this study and report.)

This chapter summarizes most, but not all,⁴ of the analyses presented as a collection of papers in this report, specifically addressing the following questions:

- What are the characteristics of adult education providers in welfare-to-work programs? What are typical attendance patterns in these classes?
- To what extent, and for whom, do welfare-to-work programs increase participation in adult education services and increase educational attainment and achievement?
- Do education-focused welfare-to-work programs improve education outcomes?
- What is the payoff to additional participation in adult education?

³GED refers to the GED credential and the exams that individuals must pass to attain it. In this report, we use GED to refer to both the credential and the exams.

⁴For example, Chapter 5 of this report presents comparisons of program impacts on earnings and welfare receipt for welfare recipients in LFA and HCD programs. Because these comparisons do not directly relate to participation in adult education and outcomes directly associated with such participation, these analyses are not summarized here.

- How do education outcomes and milestones affect the employment outcomes and self-sufficiency of welfare recipients?
- Among those who participate in adult education, who moves on from adult education to receive postsecondary education and training, and how does this contribute to their earnings and self-sufficiency?

The analyses in the report take a unique perspective on adult education, one that will be of interest to the adult education community as well as to those involved in welfare policy. First, our analyses reflect on the effectiveness of adult education services provided to a highly disadvantaged group of students: low-income, mostly jobless, single-parent women who lack a high school diploma or GED and are receiving welfare. This group represents a significant share of all adult education students. One study found that, in 1992, 22 percent of all new students in U.S. adult basic education, high school completion, and GED programs had received public assistance in the year before enrollment; about 11 percent of all new ESL students met this criterion.⁵ This same disadvantaged group is likely to be of increasing concern to welfare policymakers. Drastic reductions in welfare caseloads since their peak in 1994 are also changing the face of caseloads, which now increasingly consist of “hard-to-serve” recipients. It is likely that many of those left on the welfare rolls will lack an education credential and will have poor reading or math skills.⁶

Second, the adult education programs studied and their effects on students reflect the fact that these programs operate within the context of welfare-to-work programs. Such programs provide other services, such as counseling, child care, job search assistance, and postsecondary education and training. Although many issues facing adult educators are essentially unrelated to the welfare status of the students they serve, the context of available supports, expectations, and requirements is different for those enrolled in adult education as part of a welfare-to-work program. Thus, the measured effects of these programs reflect not only the payoff to adult education but the effects of a larger package of services and requirements that included adult education. As part of such a package, the adult education provided could be strengthened to produce greater effects (for example, if students receive help with child care or transportation). However, the effects of adult education also could be weakened by other program components (for example, if program rules limit the time that students may be enrolled in adult education or if the program emphasizes a quick transition from welfare to work).

Third, for welfare recipients in our study, participation in adult education was mandatory. While “traditional” adult education students enroll on a voluntary basis and can therefore be presumed to be motivated to learn, such motivation may sometimes be lacking when students are compelled to participate by mandatory welfare-to-work programs. Like most other adult education students, those mandated to participate often have done poorly in school in the past and may be alienated from traditional educational institutions and modes of instruction. Unlike the voluntary, or traditional, students, however, students connected to a welfare-to-work program may initially be motivated to attend classes less by the desire to learn or to obtain a credential than by the

⁵Young et al., 1994, p. 15.

⁶Danziger et al., 1999.

Definition of Key Terms

Many of the terms used in this report are not reintroduced and redefined in each chapter. In some cases, these terms are ambiguous or have a somewhat different meaning in the context of welfare-to-work programs than is common in the adult education field. In this box, we introduce some of the most commonly used terms in this report.

Throughout the report, *adult education* refers to any or all of the following:

- **Adult basic education (ABE) classes.** These provide reading and math instruction to students whose achievement levels are lower than is required for high school completion or GED classes—typically at the eighth grade level or lower.
- **General Educational Development (GED) classes.** These prepare students to take the GED tests that are used by states to award certificates signifying knowledge of basic high school subjects (social studies, literature, science, math, and writing). Students entering GED classes usually are expected to have language and math skills at a ninth grade level or higher so that they can use the instructional materials.
- **High school completion classes.** These replicate a high school curriculum in an adult school setting. Students usually must have language and math skills at a ninth grade level or higher to enter a high school completion program. When students finish the course of study, they receive a high school diploma.
- **English as a Second Language (ESL) classes.** These provide instruction in how to read and write English to people who are not fluent English speakers.

The term *welfare* encompasses both Temporary Assistance for Needy Families (TANF) and its predecessor, Aid to Families with Dependent Children (AFDC).

Program group members are sample members who were randomly assigned to a welfare-to-work program.

Control group members are sample members who were randomly assigned to a control group, were excused from a welfare-to-work program mandate, and were ineligible to receive most program services. However, control group members could seek out similar services in the community on their own.

Program participants are sample members who participated in a particular program activity. This could be a class, a training program, a job club, or something similar. Program participation is not limited to program group members assigned to welfare-to-work programs, because control group members could access services outside welfare-to-work programs on their own. Depending on the context, program participants are sometimes referred to as “students,” as “enrollees,” or as “recipients” of education or training services.

need to comply with welfare-to-work program requirements in order to avoid reductions in their welfare grant.

Finally, in the context of welfare-to-work programs, adult education is viewed as an intermediate goal, not as an end in itself. Financial self-sufficiency of adult students and their families is the ultimate goal of these programs.

These factors have helped shape the analyses and interpretation of results in this report. However, one additional factor—one of importance to the adult education community—cannot be taken into account in this examination. The prevalence of learning disabilities among welfare recipients is estimated to be between 25 and 50 percent.⁷ As implemented during the study period and probably continuing into current operations, most programs did not assess welfare recipients for learning disabilities, which could affect the programs' ability to address these disabilities, clients' skill development in the programs, and clients' subsequent labor market success.

C. Findings in Brief

Although the five chapters following this one use various analytical techniques and samples, taken as a whole they support the following broad conclusions about adult education in the NEWWS welfare-to-work programs serving those without a high school diploma or GED:

- In providing services for welfare recipients, adult education programs generally did not adapt their curricula or teaching methods to fit the specific needs of this group of students.
- Even when welfare recipients preferred not to enter adult education, welfare-to-work programs substantially increased their receipt of such education. There was no evidence that those who were mandated to participate (most of whom did not express a preference for adult education) benefited any less from their participation in terms of educational attainment and literacy or math gains than those who volunteered.
- On the whole, assignment to education-focused programs did not appear to have a substantial payoff for the welfare recipients in our study in terms of their education outcomes. Although the programs increased GED receipt, most participants did not earn a GED, and few experienced significant increases in their reading and math skills. Three-year impacts on earnings and welfare receipt in HCD programs were smaller than those experienced by welfare recipients in LFA programs.

⁷See, for example, Center for Law and Social Policy, 1998, and Pavetti, 1997.

Combining Experimental and Nonexperimental Research Methods

The random assignment research design (described in the box on page 2) was used for certain analyses in this report, but others were conducted with *nonexperimental* methods, which go beyond the random assignment research design. In general, the distinction between these two methodologies depends on whether a question concerns effects of the programs *as a whole*, which the random assignment research design is well equipped to address, or whether a question concerns the effects of program *components* or program *outcomes*, such as participation in adult education, GED receipt, or participation in postsecondary services. Because of the protection offered by the random assignment research design, findings about the programs as a whole (concerning questions like “By how much did the HCD programs increase participation in adult education?”) are more reliable and can be presented with greater confidence. Findings about program components or outcomes (concerning questions like “By how much does a GED increase subsequent enrollment in postsecondary education or training?”) are not protected by random assignment and therefore have greater uncertainty surrounding them.

In addition to the difference in research methods, the two types of questions outlined here differ in their substantive focus. The “program” questions are less precise than the “component” or “outcome” questions, describing how assignment to a broad program affected outcomes, not how specific events and services did. For example, many of those assigned to welfare-to-work programs did not participate in program activities, or participated for short periods. This limits the extent to which the program could affect sample members’ education outcomes. No such limitations exist for analyses involving specific program components or outcomes because participation is explicit in the definition of the measure studied. An estimate of the effects of GED receipt on earnings in principle (and on average) applies fully to everyone who received such a credential, as does an estimate of the payoff to an additional month of adult education. Thus, in summary, the experimental findings presented are robust and reliable but apply to programs that do not always reach participants as intended, whereas the nonexperimental findings are less reliable analytically, but answer more concrete policy questions facing the adult education community.

- Gains in reading skills appeared to vary with the length of time spent in the adult education programs. Stays shorter than a year (which the majority of participants in adult education had) did not improve reading skills measurably, whereas longer stays were associated with substantial gains, comparable—for this sample—to those associated with regular high school attendance.
- Improvements in math skills were associated with shorter spells of adult education. After six months of adult education, most participants’ math skills no longer improved.
- GED receipt also was associated with shorter spells of participation in adult education. Additional participation beyond six months did not increase GED

receipt, possibly because most GED recipients were close to being able to pass a GED test when they entered the programs.

- Higher average levels of teachers' experience and education in the adult education programs appeared to enhance the payoff to participation in adult education in terms of reading and math skills.
- The welfare recipients who were most likely to get GED certificates and receive postsecondary services were those who had higher initial reading and math skills when they entered the welfare-to-work programs.
- As students earned GEDs, increased basic skills, or subsequently participated in postsecondary programs, they appeared to have substantial benefits in terms of employment, earnings, and self-sufficiency. However, relatively few adult education participants received a GED, increased their basic skills, or entered postsecondary programs.
- Receipt of a GED credential was an important predictor of subsequent enrollment in postsecondary programs. Participants in basic education programs who went on to postsecondary education or training programs appeared to experience substantial benefits from them in terms of increased earnings and self-sufficiency.

II. Summary of Each Chapter's Findings

This report on adult education in 11 welfare-to-work programs addresses many different aspects of the adult education experience of welfare recipients in welfare-to-work programs. Specifically, the report traces the steps outlined in Figure 1.1,⁸ which describes the hypothesized effects of adult education in welfare-to-work programs.

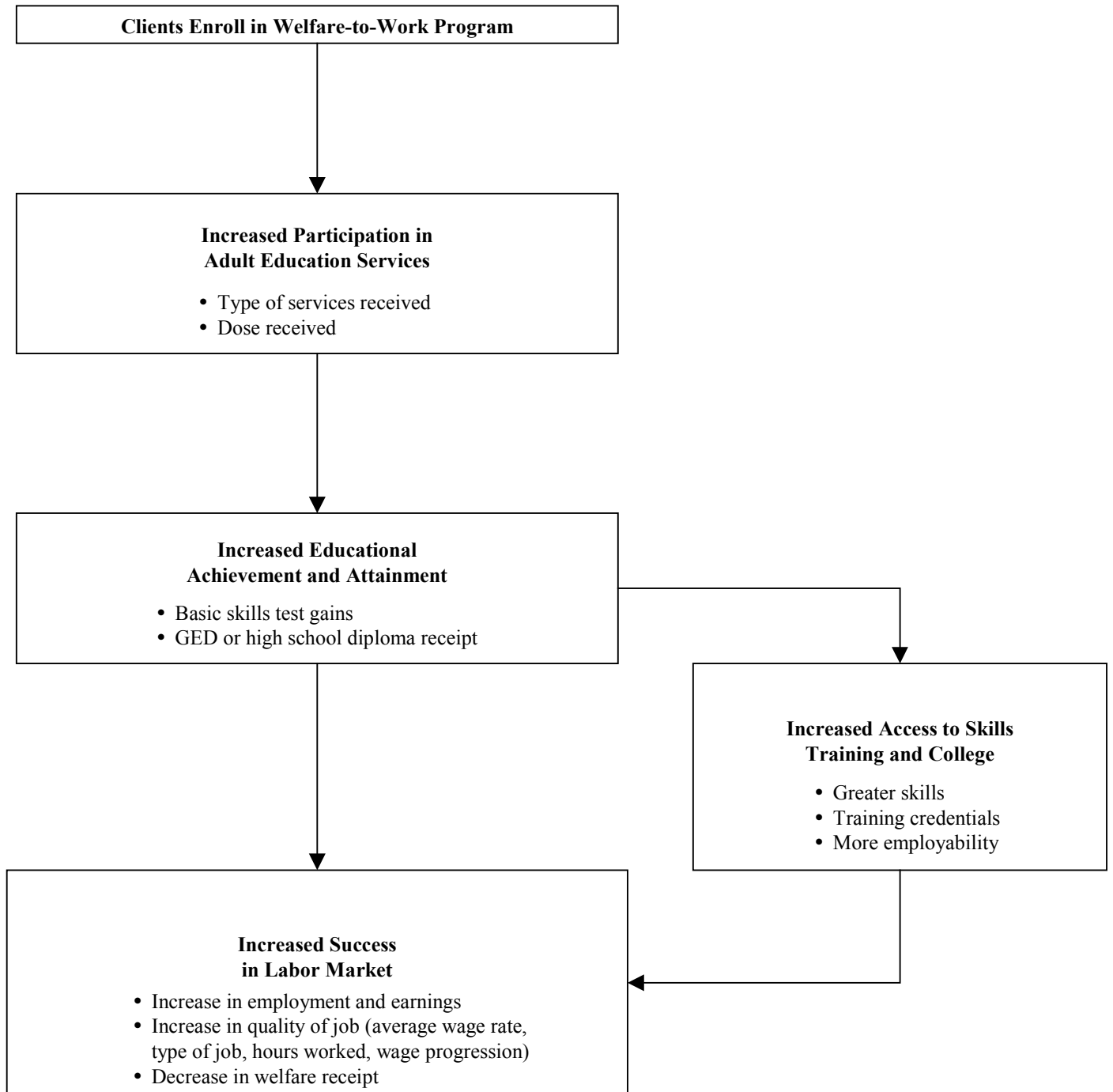
In Chapter 2 we focus on the second and third boxes in Figure 1.1, addressing the questions of how education-focused welfare-to-work programs affect participation in adult education, what adult education that is provided to welfare recipients looks like, and how these welfare-to-work programs affect education outcomes. Specifically, program effects are presented on participation in adult education, basic skills, and GED receipt in three education-focused programs (in Atlanta, Grand Rapids, and Riverside). We explore how these effects vary across different subgroups and attempt conceptually to link effects on one outcome to effects on other outcomes.

In Chapter 3 this analysis is taken a step further, focusing more directly on the third box in Figure 1.1, describing the relationship between participation in adult education and improvements in the skill and educational attainment of participants. For example, we examine how an extra month of participation affects key education outcomes and how this effect varies with (1) total time spent in adult education, (2) individual student characteristics, and (3) program and staff characteristics.

⁸Adapted from Martinson and Friedlander, 1994.

Figure 1.1

**For Sample Members Without a High School Diploma or GED at Random Assignment:
Hypothesized Effects of Adult Education in Welfare-to-Work Programs**



In Chapter 4 we look at the fourth box and link education outcomes to employment outcomes and self-sufficiency, addressing questions like “What is the GED worth to welfare recipients?” and “How are additional reading and math skills valued in the labor market?” Chapter 4 uses survey and administrative data across all 11 welfare-to-work programs in each of the seven NEWWS sites.

Chapter 5 revisits the experimental comparisons (of randomly created program and control groups), comparing all 11 programs for their effects on earnings and welfare receipt and attempting to isolate factors that made some programs more successful than others.

Last, Chapter 6 completes our analyses by focusing on the box to the right in Figure 1.1, addressing the important intermediate step of postsecondary education and training, which is often believed to be an important intermediary link between participation in adult education and longer-term improvements in earnings and other employment outcomes. The chapter addresses the questions: “What determines whether adult education participants enter postsecondary programs?” and “Do participants benefit from these programs?”

A. Characteristics of Adult Education in Welfare-to-Work Programs and the Effects of Education-Focused Welfare-to-Work Programs on Educational Attainment and Achievement (Chapter 2)

Site visits and surveys of education providers in the HCD programs in Atlanta, Grand Rapids, and Riverside found that these welfare-to-work programs used a wide variety of educational institutions to provide adult education to the welfare recipients enrolled in these programs. Research conducted at the adult education provider sites concluded that the inclusion of welfare-to-work program participants in the adult education classes usually did not greatly affect the providers’ operations, curricula, and teaching methods. In other words, welfare-to-work program participants took classes together with non-welfare recipient adult education students and generally did not receive services specially tailored to their needs from adult education providers or classroom teachers. In some cases, hours were expanded to enable welfare recipients to participate for 20 hours a week, as required by welfare-to-work program regulations. In other cases, additional counseling or job-readiness instruction were added for welfare recipients. Only in Riverside did the welfare-to-work program negotiate contracts with adult education providers and use welfare-to-work funds to pay providers serving their clients. However, aside from these contractual differences, there were few systematic differences in the adult education provided across the three sites.

The welfare-to-work programs substantially increased participation in adult education for those who entered the study without a high school diploma or GED (the sample analyzed throughout the report). Without the programs, about one-fifth of sample members sought out adult education programs on their own (as evidenced by two-year participation rates in the control group). The three programs studied in Chapter 2 (Atlanta, Grand Rapids, and Riverside) more than doubled this rate of participation: one-half of program group members participated in adult education. When they enrolled in adult education, program group members also stayed longer. Across all sample members (including those who did not participate at all), the program more than tripled the average number of hours of adult education, from 68 for control group members to 244 for program group members. This means that the average *participant* in pro-

gram-provided adult education classes was enrolled for about 488 hours. Thus, the programs induced more individuals to participate in adult education, and those who participated did so for more hours.

As part of the analysis, impacts on adult education participation were estimated for 20 different subgroups, defined using individual characteristics measured at program entry (hereafter referred to as “baseline characteristics”).⁹ Examples of such subgroups include persons with young children, those who dropped out of school having completed eighth grade or less, those expressing a lack of desire to go back to school, and those with personal or family barriers to participation. Without exception, the three HCD programs increased participation in adult education for each of these subgroups. This shows that mandatory welfare-to-work programs can increase welfare recipients’ exposure to adult education even among welfare recipients with barriers to participation.

The three programs achieved modest impacts on GED receipt during a two-year follow-up period. Whereas only 4 percent of control group members received a high school diploma or GED during the follow-up period, 11 percent of program group members received such a credential. This impact more than doubled the proportion with an education credential; however, fewer than one in five participants in adult education earned a credential. (Many sample members might not be expected to attain such a credential during the two-year follow-up period, because they entered the programs with low achievement levels or limited English skills.)

Moreover, the three programs did not increase scores on standardized reading and math tests, conducted as part of the two-year follow-up interview. As discussed more extensively in Chapter 2, the combination of modest increases in GED receipt and a lack of gains in measured literacy and math skills has been found in several previous studies. There are several possible explanations for this apparent discrepancy. First, it is possible that the GED test and the basic literacy and math tests administered in the survey do not capture the same underlying skills. In that case, someone might be able to pass a GED test without showing concomitant gains in basic reading and math skills. It also is possible that difficulties with the administration of the literacy and math tests reduced the statistical reliability of our findings. (These tests were administered as part of a long interview in sample members’ homes—not the ideal environment in which to concentrate on a skills test.) However, it is reasonable to conclude that, on average, participants experienced limited benefits in terms of increased skills and credentials from their participation in adult education. Subsequent analyses presented in Chapter 3 and 4 further explore this issue.

Impacts on GED receipt and educational achievement also were estimated separately for 20 subgroups. Researchers found that impacts on GED receipt were strongest for those entering the welfare-to-work programs with already high reading and math skill levels. Those entering with high reading scores experienced an impact (that is, an increase relative to the control group) of 16 percentage points. Conversely, those entering with low reading scores experienced an impact of only 3 percentage points. Those entering the program having left school below the ninth

⁹When subgroups are defined using preprogram baseline characteristics, comparisons of outcomes for program and control groups *within* these subgroups are considered fully “experimental”; that is, these comparisons constitute unbiased estimates of the program effects for those particular subgroups.

grade experienced no impact on GED receipt. Thus, it seems that the programs' effects on GED receipt were closely tied to program participants' entry-level skills. Those who needed little basic education to earn a GED were much more likely to be successful in this regard. This finding is also consistent with prior research, involving both mandatory and voluntary programs for school dropouts.¹⁰

Interestingly, motivation to participate in adult education programs did not affect program success in terms of GED receipt. Even though some sample members indicated that they did not want to attend school, those who made this claim as they entered the programs and were required to participate anyway experienced substantial increases in GED receipt, just like sample members who did express a preference for adult education at program entry. This shows not only that welfare-to-work programs can induce individuals to do things they might not otherwise do but also that participants in adult education can be successful even if they prefer not to participate.

B. Individual Efforts and School Effects: The Payoff to Participation in Adult Education (Chapter 3)

Nonexperimental analyses in the three HCD programs discussed above (Atlanta, Grand Rapids, and Riverside) suggest that the amount of time that participants spent in adult education classes affected their educational attainment and achievement outcomes. However, these relationships were not straightforward. During participants' first year of participation in basic education, additional months of participation were not associated with higher literacy test scores. However, after a year of participation, additional months in adult education appeared to substantially increase test scores (an increase of .55 of a standard deviation for six additional months of participation).¹¹ In this sample, this effect was comparable to the differences in baseline literacy scores associated with having attended an additional month of high school. These findings suggest that a threshold level of participation of approximately one year is needed to achieve meaningful literacy gains lasting until the test administered in the two-year follow-up survey. (There could be a significant lag between the end of participation and this survey, which could make it difficult to reliably identify more modest gains in basic skills.)

For measured math skills, this relationship looked markedly different. Increases in math skills were associated with additional months of basic education during the first six months only. After that, no further increases in these skills were found. This suggests a "plateau" rather than a "threshold" type of relationship. Such a pattern could reflect limitations in the math skills being taught in adult education classes.

The relationship between time in adult education and GED receipt followed a similar pattern. Additional months of participation increased the likelihood of GED receipt during the first six months of participation but not thereafter.

¹⁰See, for example, Quint et al., 1997, and Martinson and Friedlander, 1994.

¹¹A standard deviation is a statistic capturing the variability of a particular measure or outcome in a sample. Effects on test statistics and other education outcomes are often expressed as a percentage of a standard deviation, because absolute changes in these outcomes are difficult to interpret.

When these analyses were conducted separately for program group members and control group members, it appeared that both groups experienced similar patterns of gains in literacy and math skills. This is interesting, because participation for program group members was mandatory, while control group members sought out adult education services on their own initiative and participated in them voluntarily. One might expect the payoff to the control group to be greater, but no such difference was found. A difference was found for GED receipt, but it was the opposite: program group members were more likely than controls to receive a GED as a result of additional participation in adult education.

When these analyses were conducted for different groups of sample members defined using baseline characteristics, little variation in the estimated effects of additional education on literacy and math skills was found. Sample members who faced greater barriers to participation or who were less motivated to participate in adult education benefited from additional education in similar ways as sample members who did not face these barriers. However, the analyses also found that the relationship between adult education participation and GED receipt varied across the subgroups. The increased probability of earning a GED from short-term participation, as mentioned above, did not hold up for sample members entering the program having completed less than ninth grade. Conversely, it was found that, for those with low initial skill levels, the likelihood of GED receipt continued to increase with additional participation beyond six months. This is unsurprising, because one might expect longer-term participation in adult education to help those who started out with low skills more.

Last, we analyzed how the relationship between time spent in adult education and education outcomes was affected by differences in provider characteristics, including measures such as class size, teachers' experience and education levels, individual attention, the strength of the link between the education provider and the welfare-to-work program, and program exit standards. The reliability of this analysis was limited, because we were unable to study the links between individual teachers and individual students, instead having to correlate student outcomes with school-level averages of teacher characteristics. However, within these limitations, teachers' experience and teachers' education each appeared to enhance significantly the payoff to additional time spent in education classes in terms of reading and math skills. No provider characteristics were identified that affected programs' effectiveness in increasing GED receipt. (However, provider data were limited, and the same caveats about our ability to match students to specific teachers applies here.)

C. Does the Low-Wage Labor Market Value Basic Education? Effects of GED Receipt and Literacy Gains on the Self-Sufficiency of Welfare Recipients (Chapter 4)

Having analyzed how participation in adult education programs affects literacy, math scores, and GED receipt, the next step (in Chapter 4) is to analyze the extent to which improvements in these education outcomes affect welfare recipients' employment outcomes and welfare receipt. If those effects are strong, improving welfare-to-work programs' ability to improve education outcomes would also improve the programs' effectiveness in terms of employment and welfare receipt. However, this would not be the case if these education outcomes had little effect on sample members' employment and welfare receipt. In that case, a focus on immediate employment might be more appropriate.

The analyses presented in Chapter 4 also contribute to our knowledge about the value of the GED and the importance of basic skills in the low-wage labor market. Much of the GED-related research has focused on comparisons of GED holders and high school graduates, using national data sets. Those findings may have limited relevance for programmatic choices made on behalf of welfare recipients, whose needs and experiences may be different from those of other school dropouts.

GED receipt appeared to substantially increase earnings. The estimated effect on annual earnings in the third year of follow-up was approximately \$771. GED recipients also received fewer welfare benefits (an estimated reduction of \$331). These estimated effects remained largely unchanged when measures of time spent in adult education or of reading test scores were introduced as control variables into the analysis. This suggests that our estimates of the value of this credential reflect the effects of the credential itself, not the underlying basic skills or participation in adult education programs. It also was found that earning a GED had stronger estimated effects for program group members than for control group members. This suggests that the other aspects of the welfare-to-work programs (ranging from the program's message to services like job search assistance, skills training, and college programs) further enhanced the value of this credential by increasing participants' ability to make use of their newly acquired credential in the workplace.

Like all analyses of educational attainment, analyses of GED receipt are potentially affected by selection bias. Such bias occurs when recipients of GED credentials are different from nonrecipients in ways that are not controlled in the analysis. In Chapter 4, effects of GED receipt were estimated in various ways to assess the sensitivity of the findings to selection bias and other problems. In general, the different estimates were consistent with one another, and there was no evidence that uncontrolled differences in motivation or ability explained the apparent effects of GED receipt on earnings and self-sufficiency. However, the findings presented in Chapter 4 could not be confirmed with an advanced statistical method (an "instrumental variables" estimator) because statistical precision was lacking.

Analyses of the effects of greater reading skills on employment outcomes and self-sufficiency found those effects to be substantial. An increase of one standard deviation in reading scores was associated with \$355 in additional earnings during the year following the test (the third year of follow-up). This effect was independent of (that is, in addition to) any effect from earning a GED credential. (Introducing math skills separately did not show an independent effect separate from that associated with greater reading skills.) All this suggests that HCD programs could have more substantial effects on the economic outcomes of welfare recipients if these programs managed to improve their effects on mediating education outcomes. Our analyses suggest that increased retention might be one way to achieve this. Research on "best practices" in adult education for welfare recipients has suggested that programs' ability to retain students and improve their skills is affected by many program characteristics, including:¹²

- developing a well-defined mission,
- providing specially targeted classes to students who are welfare recipients,

¹²Adapted from Quint, 1997, p. 10.

- having skilled, experienced teachers,
- emphasizing staff development,
- adopting varied instructional approaches, including small group and computer activities,
- communicating frequently with welfare-to-work program staff,
- stressing regular attendance,
- aggressively following-up on absences,
- adopting relatively intensive class schedules, and
- promoting a high degree of teacher-student and student-student interaction.

Finally, a greater emphasis on identifying and addressing learning disabilities, which now remain largely undiagnosed, could greatly improve programs' ability to serve their students successfully.

D. Beyond Basic Education: The Benefits of Skills Training and College (Chapter 6)

The last chapter of this report describes the effects of postsecondary education and training, focusing on participants in adult education programs across all 11 programs included in the NEWWS study. The chapter analyzes who among these participants go on to postsecondary education and training and how such postsecondary participation affects their employment outcomes and self-sufficiency.

The chapter reports that relatively few of those who participated in adult education programs (15 percent of participants) made it to postsecondary services during the two-year follow-up period. Among adult education participants, those who earned a GED and did so in a relatively short amount of time (less than a year) were most likely to enter postsecondary programs. These sample members also were more likely to have entered the NEWWS study with higher initial literacy skills and having completed more grades in high school.

Once enrolled in skills training or college programs, postsecondary participants remained in these programs for about seven months on average. More than 40 percent participated longer than six months, and almost 15 percent were enrolled longer than a year. At the time of follow-up, 29 percent of postsecondary participants were still enrolled in these programs, which means that these participation figures are preliminary and that participation could turn out to be longer on average when additional follow-up survey data become available. For those entering education programs without a high school credential, participation in postsecondary programs often follows a spell of adult education, suggesting that successful HCD programs for welfare recipients without high school credentials may require more time than many states' welfare time limits allow.

In nonexperimental analyses, participation in postsecondary programs was found to have substantial benefits in terms of greater earnings and lower welfare receipt. These benefits did not

appear until after sample members completed their education and training. Effects for postsecondary participants appeared in the third year following their initial adult education spell. In that year, their earnings were \$1,542 (or 47 percent) higher than those of sample members who received only adult education, while their welfare benefits were \$919 (or 32 percent) lower. These estimated effects were not contingent on participants completing their spell of postsecondary education or training with a credential or certificate.

III. Conclusions and Implications for Policy

A. The Challenge of Making Adult Education Work for Welfare Recipients

This study of adult education for welfare recipients who do not have a high school credential uncovered several different patterns of effects. Assignment to a Human Capital Development program had substantial impacts on these welfare recipients' participation in adult education, modest impacts on their GED receipt, and no impacts on measured literacy and math skills. The study also found that, within a three-year follow-up period, the effects of HCD programs on earnings and welfare receipt were positive but limited, especially compared with labor force attachment programs.

A second pattern of findings concerns the dynamics of participation, learning, graduation, and skills acquisition that underlie the experimental impact story. The exploration of this pattern begins (in Chapter 3) with a discussion of one of the key questions underlying education and learning: What is the value of additional instruction? In addressing this question for three education-focused programs in Atlanta, Grand Rapids, and Riverside, Chapter 3 uncovers that additional months in school (our only reliable measure of additional instruction) matter; they increase literacy, math skills, and GED receipt. However, long-term participation (longer than a year) is necessary to achieve a measurable payoff in increased literacy skills, while increases in math skills and GED receipt seem to be limited to the first six months of instruction.

At the same time, the average program group member in these three programs received only about 244 hours (or about twelve 20-hour weeks) of adult education, which is substantially less than one year of high school—insufficient to make up the education deficit with which most of these welfare recipients entered the programs. This could explain why only 11 percent of program group members earned a GED during the follow-up period and why fewer than 15 percent of participants in adult education went on to skills training and college programs.

Next, using nonexperimental methods, the report shows that for those who did reach these milestones, participating in adult education was beneficial. Chapters 4 and 6 show that payoffs from GED receipt, increased literacy skills, and postsecondary education and training were substantial. Thus, in summary, the analyses presented in this report confirm the internal logic underlying the human capital program model (as outlined earlier in Figure 1.1). However, too few program group members made it through the different steps to experience the anticipated payoffs at the end. Assuming that other program participants would experience comparable benefits, the challenge facing welfare-to-work program administrators and adult education providers is to find a way to retain more students long enough, to help them reach the immediate goal of earning a GED, and to help them access postsecondary services that allow them to capitalize on

this credential. This could occur while people are receiving welfare benefits or after they have left the welfare rolls. However, there is no guarantee that simply increasing the duration of participation is sufficient to reach educational goals. The quality of instruction, the appropriateness of the material and technology for participants with low skills and possibly with learning disabilities, and the sometimes limited motivation of program participants are likely important as well, although our study did not examine these factors.

B. Policy Implications

- **Education-focused interventions for welfare recipients with low basic skills can improve these skills and increase GED receipt. However, improvements in these outcomes may require long spells of participation in adult education programs.**

The analyses presented in this report show that the long-term payoffs of an education-focused approach for welfare recipients without a high school diploma or GED can be substantial. However, the report also shows that it is a challenge to improve the basic skills and educational attainment of welfare recipients, even in programs that are directly focused on education outcomes. For those entering with low skills and lacking years of high school, several years of basic education and postsecondary education may be needed to promote long-term success and self-sufficiency. In the current welfare environment, such a long-term commitment carries some risk inasmuch as long-term participation may exhaust welfare recipients' limited allotted time on welfare.

- **For welfare recipients who are within easy reach of earning a GED, pursuit of such a credential is a good program option that produces substantial benefits, increasing welfare recipients' earnings and their access to postsecondary education or training.**

Success is easier to achieve for those who are close to passing the GED test. Our findings suggest that this credential is a worthwhile short-term program goal, especially if it is combined with a targeted postsecondary activity. Together, a GED and skills training greatly increased earnings and reduced welfare receipt in the third year of follow-up. Education-focused welfare-to-work programs may be most successful when they can combine GED preparation and postsecondary services in a relatively short and intensive program (an option that, however, will not work with the most educationally disadvantaged).

- **Too few adult education students and GED recipients continue on to postsecondary education or training. Links between adult education programs and postsecondary programs could be strengthened, and adult education students should be made aware of the limitations of having just a GED credential as a way to improve one's employment outcomes.**

Although GED receipt and increased basic skills appear to have positive effects on the earnings of welfare recipients, those effects appear to be much stronger when spells of adult education and receipt of a GED are followed by enrollment in postsecondary education or training programs. The orientation of many of these programs toward specific jobs and career opportunities may be a factor in explaining these programs' apparent benefits. Participation in postsecond-

ary education or training carries a price in terms of lower short-term earnings, but the longer-term effects of these services are substantial. Especially after a long spell of participation in adult education, it makes sense to cap off this investment with some college or vocational skills training.

- **The analyses presented in this report address important questions about adult education provided to welfare recipients, but many important questions remain, especially regarding the quality of participation in adult education, the appropriateness of adult education services provided to welfare recipients, and the possible benefits of education and training for those who do have an education credential when they enter the programs.**

In this report, we present program effects on participation in adult education and key educational outcomes. We relate these effects to one another and to the employment and welfare outcomes of those being targeted by the programs. However, although we assessed the effects of participation in adult education, we did not capture all the reasons for *non*participation. Although we measured the effects of earning a GED, we do not know why so many participants never received this credential. Answers to both of these questions, and others like it, may provide a greater understanding of the “quality” of participation (that is, the actual commitment to learning manifested by students who were coerced to participate in adult education) and by the quality of the instruction (that is, the appropriateness of teaching materials and techniques for the welfare recipients in these programs). The study data did not capture either one of these “quality” measures accurately, and it is therefore difficult to say whether simply increasing enrollment in adult education programs beyond current levels would significantly improve the outcomes of these programs. More detailed data about the quality of students’ program experience must be collected to address these questions, and more systematic comparisons of the different types of adult education programs that serve welfare recipients are needed.

The analyses presented in this report are limited to welfare recipients who did not have a high school diploma or GED and were considered to be in need of basic education. No parallel study was conducted to examine the effects of education and training on welfare recipients who did have an education credential. Our findings do not generalize to this group, and additional research may be needed to assess whether and how additional education and training benefits welfare recipients who are less disadvantaged academically.