

# Executive Summary

Increasingly competitive global markets and accelerating technological changes have increased the need for incumbent workers to regularly upgrade their knowledge and skills, not only for their own job security, but also to ensure the competitiveness of U.S. companies and the continued success of the economy. In an effort to test strategies for promoting continuing education and training among mature incumbent workers (individuals age 25 and over with recent work experience), the U.S. Department of Labor (DOL) initiated the Lifelong Learning Demonstration. The demonstration included designing and testing a targeted public information campaign promoting lifelong learning to mature incumbent workers in the Greater Baltimore area. To encourage investment in upgrading skills, the public information campaign provided information on the benefits of additional education and training and financial aid options — including the then-new Federal Direct Student Loan (FDSL) program— and made it easier for the target population of mature incumbent workers to obtain information about education and training opportunities at local educational institutions.

This report presents the findings from the Baltimore-area demonstration on the impact of the public information campaign, workers' decision-making process and barriers to investing in additional education, and characteristics of the adult students and their schooling experiences.

## Overview of the Demonstration

In early 1995, the U.S. Department of Labor (DOL), with the assistance of the Maryland Higher Education Commission (MHEC), recruited 12 educational institutions in the Greater Baltimore area to participate in the Lifelong Learning Demonstration. These institutions' roles in the demonstration were to provide input to the brochures and informational materials used in the public information campaign, to disseminate information to workers who expressed interest in their education and training courses, to provide data for the demonstration evaluation, and to offer FDSLs as a financing option. These institutions were diverse in type, including community colleges, private career schools, and four-year colleges and universities.

In June 1995, DOL contracted with Abt Associates Inc. and its subcontractors, Cygnet Associates and Battelle Memorial Institute, to implement and evaluate the Lifelong Learning Demonstration. The demonstration sample of mature incumbent workers was identified using a combination of demographic data provided by a national consumer data vendor and wage data from Maryland Unemployment Insurance earnings records. Mature incumbent workers were defined as individuals people age 25 or older who earned more than \$1,105 (half time at the minimum wage) in at least six out of eight quarters just prior to the first demonstration mailing, including the quarter immediately prior to the mailing.

To test the effect of the targeted public information campaign using the most rigorous methods available, research sample members were randomly assigned to a treatment group who received the demonstration brochures and informational materials, and a control group who did not. The evaluation was also designed to collect data on the education and training experiences of both treatment and control groups over time. Hence, the demonstration also provides a rich source of information on the education and training activities of mature incumbent workers.

Over 200,000 people were selected for the main demonstration research sample (103,732 for the control group; 104,668 for the treatment group). Two mailings of informational brochures were sent to the treatment group, in June 1996 and October 1996. Brochure recipients were invited to return a postcard or call a toll-free number to receive additional information from any or all of the participating educational institutions.

Data for the analyses presented in this report were collected from participating schools (enrollment and financial aid records), the Maryland Higher Education Commission (enrollment records), the Maryland Department of Labor, Licensing, and Regulation (wage records), Experian, a national consumer data vendor (demographic and geographic data), and a follow-up survey of a subsample of the research sample, conducted approximately two years after the first mailing (data on educational activities and perceptions, employment, and background characteristics).

## **Impacts of the Demonstration on Educational Outcomes**

The primary objective of the Lifelong Learning Demonstration was to encourage adult workers to invest in additional education and training to upgrade their skills and, therefore, their productivity and earnings. To test whether this objective was achieved, we estimated the impact of the demonstration on school enrollments, the number of credits earned, the receipt and amount of financial aid, and the receipt and amount of FDSLs. These outcomes were measured over a two year follow-up period for three different universes of education and training program: the participating educational institutions, all public educational institutions in Maryland, and all education and training programs reported on the follow-up survey. For the follow-up survey sample, we also estimated impacts on two intermediate outcomes: the percent considering attending a school or training program in the future; and the proportion of respondents who report that “finding out what schools offer the programs you want” is a big problem.

The demonstration did not have a statistically significant impact on any of these educational outcomes during the two-year follow-up period. We conclude that the treatment—a brochure providing comprehensive information on education and training opportunities and making it easier to acquire more career, school, and financial aid information—was not a strong enough intervention, by itself, to change workers’ behavior in such a substantial manner. That is, going back to school can mean a radical change in a working adult’s life and it would take a stronger intervention to appreciably increase the number of people enrolling in education and training institutions.

Although the demonstration did not test alternative interventions, consideration of the barriers to further education reported by sample members suggests some possible ways to strengthen the assistance provided to workers interested in upgrading their skills. For example, an intervention focusing on reducing the informational barriers to obtaining additional education and training—as the Lifelong Learning Demonstration did—might offer the opportunity of free or inexpensive career and academic counseling sessions. To be effective, these sessions would likely have to be conducted in small groups, or even one-on-one, by someone knowledgeable about the job market and educational opportunities in the local area. One possibility is to provide counseling over the telephone. Convenience is a major

factor for working adults, so the sessions would need to be held at accessible locations and at times that are convenient for workers.

It seems likely that active employer involvement in such a program would substantially increase its effectiveness in motivating workers to undertake additional education and training. Workers' employers have detailed knowledge of their existing skills and the skills that would increase their productivity on the job. Moreover, employer involvement might help to avoid or resolve the conflicts between work and education that working students often face.

In addition to providing information, an intervention might provide financial assistance to overcome the time and cost barriers that studies (this study and other research) consistently find to be major barriers for adults. To maximize its cost-effectiveness, such assistance might be designed to leverage employers' funds. For example, the government might match tuition reimbursement provided by employers to workers who enroll in education or training programs. A program aimed at alleviating the lack of time barrier might offer partial reimbursement (e.g., a tax credit) to employers who offer paid time off for education and training activities.

Again, these suggestions are entirely speculative, based on the kinds of barriers to further education cited by sample members. They would need to be tested rigorously before being instituted on a large scale.

## **The Decision to Participate in Education and Training Programs**

Although the demonstration did not appear to have an impact on participation in education and training, it did produce a wealth of information that can be used to analyze questions related to further education and training for mature incumbent workers. The first such issue we address in this report is identification of the factors underlying the decision to acquire further education. Any policy designed to encourage experienced workers to upgrade their skills must be grounded in an understanding of these factors.

In our review of the literature, we found few authors who attempted to present a comprehensive model of the decision-making process of adults considering returning to school. Studies by economists tend to focus on education and training as an investment in human capital, emphasizing costs (both out-of-pocket and opportunity costs), economic

returns, and tastes and preferences. In the non-economic literature, the most complete model of the decision-making process is the chain-of-response (COR) model developed in Cross (1981). In this report, we interpret the COR model within an economic decision-making framework, then develop a multivariate model of the decision-making process using specific measures of the general factors suggested by this model.

The COR model describes the decision to participate in a learning activity as the result of a chain of responses. The first link in the chain is personality characteristics and attitudes about education (e.g., confidence in academic abilities and motivation for achievement). In an economic decision-making framework, this link in the chain can be thought of as “tastes and preferences for education.” That is, an individual’s personality characteristics and attitude toward education determine how positive they feel about participation in an education or training program and thus how large the expected net benefit of the activity must be to induce them to participate.

The second link in the COR model is the goals that individuals may achieve through additional education and training and the importance of these goals. An individual’s evaluation of the consequences of participation is based on the subjective probability of succeeding in the activity, the probability of achieving desired goals if the educational activity is successfully completed, and the importance the individual places on these goals. In an economic framework, this link in the model can be thought of as the calculation of the expected benefits of participation. In the COR model, the first two links determine the person’s motivation to participate in education and training activities.

Life transitions can affect the motivation to participate. Triggering events for life transitions include such events as job layoffs, divorce, or the youngest child leaving home. These triggering events lead to transitions from one status to another (e.g., from one career to another), requiring preparation for a new stage of life. This may increase the benefit of learning new skills.

The third link in the COR model is the barriers and opportunities to participation. Barriers include tuition and course-related expenses, informational costs such as finding out about programs of interest, the opportunity cost of the time needed to participate, and scheduling around work and family responsibilities. Obviously, the fewer the barriers the less motivation that is needed to participate. Likewise, the more motivated a person the more

barriers they will overcome to participate. In an economic framework, barriers can be thought of as the costs of participation.

In summary, tastes and preferences for education and the expected benefits of participation determine the motivation to participate and the level of barriers or costs a person is willing to overcome to participate in education and training activities.

Consistent with qualitative and descriptive findings in prior research, we found that younger adults, females, single (never married) workers, and workers with post-secondary degrees are more likely to participate in educational activities. We interpret the age effect as reflecting the longer payback period for younger workers. The other effects probably reflect a combination of tastes for education (females and those with advanced degrees) and lower opportunity costs (single workers). Prior research on recent high school graduates finds that blacks are less likely than whites to pursue college, but there is no significant differences in enrollment rates when family income, socioeconomic status, and academic background are controlled for in the model. Like this research on young adults, we found no racial differences in participation in formal education and training programs among mature incumbent workers in the model that controlled for income and other factors. However, in contrast to prior studies, we also found that there were no significant differences in participation across racial groups in the study population of mature incumbent workers even when we did not control for other background factors.

We also included in the model several measures of the workers' perceptions of the expected benefits to them of additional education and training. Those who expected benefits that would help them on their current job were statistically significantly more likely to participate in an education or training program. The other expected benefit variables had the hypothesized positive sign, but were not statistically significant.

Several variables indicating barriers to obtaining additional education (prior school loans, presence of children and young children) and variables that could help alleviate the financial barrier (high earnings, employer tuition reimbursement programs) were also included in the model. Prior research has indicated that having outstanding school loans may be a barrier to participation in educational activities. However, our analysis indicates that people with outstanding loans were more likely to participate during the follow-up period. This suggests that presence of a prior school loan is an indication of a strong taste for education.

None of the other measures of barriers or barrier alleviators had a significant association with the decision to participate in school.

As part of this analysis, we tested whether “trigger” events that occur during the follow-up period have an effect on participation in educational activities, as suggested by the COR model. Triggers events mark the transition from one status to another and can lead to a reassessment of the costs and benefits of obtaining additional education and training. The trigger events that we measured include changes in marital status, changes in the presence of children in the household, and involuntary job loss. The only one of these variables that had a statistically significant effect on participation in educational activities was a change from at least one child to none living in the household, which was positively correlated with males’ decision to acquire additional education or training.

Finally, we modeled the decision to begin exploring educational opportunities by requesting information about local schools in response to the demonstration brochure and the subsequent participation in education and training programs by brochure respondents. We found that the factors that lead workers to take the first step toward returning to school (seeking more information about educational opportunities) tend to be more objective, observable characteristics (e.g., age, unemployment) than the factors that determine which of these workers actually participate in an education or training program. The factors that determine which of these workers ultimately participate is likely a combination of unmodeled factors and the idiosyncrasies of individual situations.

## **Characteristics of Students and Their School Experiences**

Approximately one sixth of the workers in our sample of mature incumbent workers in Greater Baltimore participated in a formal education or training program lasting more than two weeks during the two-year follow-up period. This figure does not include on-the-job training and training provided by the employer at the job-site.

Nearly three-fourths of these students had at least some college education at the beginning of the follow-up period, over half were married, and a similar proportion were over the age of 35. More than 70 percent of the students worked for employers who offered tuition reimbursement. Consistent with the results of our analysis of the education decision-

making process, the students tended to be younger and more highly educated than non-students, and were more likely to be female, single, and to have an outstanding school loan. Students were quite similar to other mature incumbent workers in their racial composition, presence of children in the household, and earnings in the pre-school period.

Nearly 40 percent of the students attended two-year colleges. A quarter went to four-year undergraduate institutions and a sixth enrolled in graduate programs. Private career or training institutions accounted for 19 percent of the students, with another 7 percent attending training courses provided by community-based organizations.

Students in the sample pursued a wide range of programs, with courses in computer and information sciences (21 percent of all students), business and management (17 percent), and education (12 percent) the most common areas of study. Most attended nights or weekends, and over half took less than 6 semester credit-equivalents in a spell of education or training. Over half graduated or completed their program during the follow-up period, and more than a third received a degree or certificate, most commonly a professional certificate or post-high school training certificate. Thirty percent were still enrolled at the end of the follow-up period; only 15 percent had not completed their program and were no longer enrolled.

Mature incumbent workers bore significant costs to participate in education and training. The average cost of tuition was \$2,661 during the follow-up period; however, 41 percent of tuition costs were below \$500 and only 14 percent were above \$5,000. In addition to tuition costs, students paid an average of \$259 for books and course materials and \$19 per week in travel costs. The cost of child care arrangements for students who used paid child care varied from \$70 to \$111 per week.

The most important source of assistance in meeting these costs was tuition reimbursement by employers; over 40 percent of the students received an average of \$2,916 each from this source. Over 80 percent of those who applied for government or school financial aid received it, but only a small proportion (12 percent) applied for this type of assistance. Loans from these sources averaged \$5,056 and grants or scholarships averaged \$2,430.

Students reported that they had to make a number of lifestyle adjustments in order to participate in education or training. The most commonly cited sacrifices, each named by more

than 60 percent of the students, were reductions in the time available for leisure time activities and to spend with their families and friends. Smaller proportions reported cutting back on leisure activities or major purchases in order to save money for school. Only about a quarter reported that they had to reschedule their work hours in order to attend courses, and a sixth said that they had to reduce their work hours.

When asked to identify the most important services that schools could provide for working students, about equal numbers named job placement assistance, career counseling, academic counseling, and assistance in learning about and applying for financial aid. Nearly three quarters felt that it was very important that these services be available on weekends and at night during the week. The school loan features most frequently cited as very important were those that make the process less cumbersome and time-consuming: having a single application for all types of Federal assistance, loan consolidation, and direct disbursement of government checks to the school. Smaller, but still substantial proportions of students (35 to 45 percent) felt that flexible repayment options, such as income-contingent repayment, extended repayment, and tiered repayment, were very important loan features.