Contract No.: K-5547-5-00-80-30
MPR Reference No.: 8279-093

MATHEMATICA
Policy Research, Inc.

# The Quantum Opportunity Program Demonstration:

# Short-Term Impacts

***August 2003***

***Allen Schirm***
***Nuria Rodriguez-Planas***
***Myles Maxfield***
***Christina Tuttle***

Submitted to:

U.S. Department of Labor
Employment and Training Administration
200 Constitution Avenue, N.W.
Room N-5637
Washington, DC 20210

Project Officer: Eileen Pederson

Submitted by:

Mathematica Policy Research, Inc.
600 Maryland Avenue, S.W.
Suite 550
Washington, DC 20024
(202) 484-9220

Project Director: Allen Schirm

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# DISCLAIMER

This report was prepared under Contract No. K-5547-5-00-80-30 from the U.S. Department of Labor. The views expressed herein do not necessarily reflect the policies or opinions of the U.S. Department of Labor.

# ACKNOWLEDGMENTS

The authors would like to acknowledge the contributions of David Lah, Eileen Pederson, Daniel Ryan, and James Woods of the U.S. Department of Labor. Several members of the Mathematica Policy Research staff also contributed to this report. Susan Mitchell and Julie Young directed the data collection. Walter Corson, David Myers, Peter Schochet, and Michael Sinclair of MPR, as well as Alan Zaslavsky of Harvard University, provided valuable technical guidance and comments on draft sections of the report. Alfreda Holmes prepared the manuscript. Errors and omissions are the sole responsibility of the authors.

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# CONTENTS


| Chapter | | Page |
|---|---|---|
| | DISCLAIMER | iii |
| | ACKNOWLEDGMENTS | iii |
| | EXECUTIVE SUMMARY | xi |
| I | INTRODUCTION | 1 |
| | Plan of the Report | 2 |
| II | WHAT IS QOP? | 5 |
| | Target Population and Sample Selection | 5 |
| | Overview of Program Components and Services | 6 |
| | What Type of a Youth Program Is QOP? | 11 |
| | QOP Funding and Structure | 13 |
| III | IMPACT EVALUATION DESIGN AND METHODS | 15 |
| | Research Questions, Outcomes, and Data Sources | 15 |
| | Obtaining an Evaluation Sample and Conducting Random Assignment | 18 |
| | Estimating Program Impacts | 19 |
| IV | PARTICIPATION IN QOP | 25 |
| | Participation in QOP | 27 |
| | Profiles of Dedicated Enrollees and Disenchanted Enrollees | 30 |
| | Reasons for Low Participation | 32 |
| V | SHORT-TERM IMPACTS ON HIGH SCHOOL COMPLETION, HIGH SCHOOL PERFORMANCE, AND POSTSECONDARY ACTIVITIES | 35 |
| | High School Completion and Performance | 35 |
| | Postsecondary Activities | 36 |
| VI | SHORT-TERM IMPACTS ON RISKY BEHAVIORS AND RESILIENCY FACTORS | 43 |
| | Risky Behaviors | 44 |
| | Risk and Resiliency Factors | 44 |

**CONTENTS** *(cont.)*

**Chapter** **Page**


VII SHORT-TERM IMPACTS ON SUBGROUPS ..... 53

Short-Term Impacts by Sex ..... 54
Short-Term Impacts by Age when Entering Ninth Grade ..... 54
Short-Term Impacts by Rank in the Baseline Grade Distribution ..... 55
Short-Term Impacts by Site ..... 56
Short-Term Impacts By Funding Source ..... 57

REFERENCES ..... 67

APPENDIX A: OBTAINING AN EVALUATION SAMPLE AND CONDUCTING RANDOM ASSIGNMENT

APPENDIX B: THE BASELINE DATA

APPENDIX C: FOLLOW-UP DATA

APPENDIX D: OUTCOMES AND SUBGROUPS

APPENDIX E: WEIGHTING, IMPACT ESTIMATION, AND VARIANCE ESTIMATION

APPENDIX F: SENSITIVITY ANALYSES

APPENDIX G: SHORT-TERM IMPACTS ON PARTICIPANTS

# TABLES


| Table | | Page |
|---|---|---|
| II.1 | DEVELOPMENTAL ACTIVITIES OFFERED BY QOP DEMONSTRATION SITES | 10 |
| IV.1 | PROFILES OF ENROLLEES ATTENDING MANY QOP ACTIVITIES AND ENROLLEES ATTENDING FEW QOP ACTIVITIES | 31 |
| V.1 | SHORT-TERM IMPACTS ON HIGH SCHOOL COMPLETION | 38 |
| V.2 | SHORT-TERM IMPACTS ON HIGH SCHOOL PERFORMANCE | 39 |
| V.3 | GROUP MEANS FOR POSTSECONDARY ACTIVITIES | 40 |
| V.4 | SHORT-TERM IMPACTS ON POSTSECONDARY ACTIVITIES | 41 |
| VI.1 | SHORT-TERM IMPACTS ON SUBSTANCE ABUSE, IN-PERSON SURVEY | 46 |
| VI.2 | SHORT-TERM IMPACTS ON SUBSTANCE ABUSE, TELEPHONE SURVEY | 46 |
| VI.3 | SHORT-TERM IMPACTS ON GANG ACTIVITY, CRIME, AND INVOLVEMENT WITH THE CRIMINAL JUSTICE SYSTEM, IN-PERSON SURVEY | 47 |
| VI.4 | SHORT-TERM IMPACTS ON CRIME AND INVOLVEMENT WITH THE CRIMINAL JUSTICE SYSTEM, TELEPHONE SURVEY | 47 |
| VI.5 | SHORT-TERM IMPACTS ON SEXUAL ACTIVITY | 48 |
| VI.6 | SHORT-TERM IMPACTS ON HOW AN ADULT POSITIVELY INFLUENCED THE YOUTH'S LIFE | 49 |
| VI.7 | SHORT-TERM IMPACTS ON PARTICIPATION IN SPECIAL PROGRAMS TO HELP STUDENTS | 50 |
| VI.8 | SHORT-TERM IMPACTS ON ATTITUDES TOWARD RISKY BEHAVIORS AND OUTLOOK ON LIFE | 51 |
| VII.1 | SHORT-TERM IMPACTS BY SEX | 59 |
| VII.2 | SHORT-TERM IMPACTS BY AGE WHEN ENTERING NINTH GRADE | 60 |
| VII.3 | SHORT-TERM IMPACTS BY RANK IN THE BASELINE GRADE DISTRIBUTION | 61 |

**TABLES***(cont.)*

**Table** **Page**


VII.4 SHORT-TERM IMPACTS BY SITE ..... 62

VII.5 QOP-GROUP MEANS BY SITE ..... 63

VII.6 CONTROL-GROUP MEANS BY SITE ..... 64

VII.7 SHORT-TERM IMPACTS ON RISKY BEHAVIORS BY SITE, TELEPHONE SURVEY ..... 65

VII.8 SHORT-TERM IMPACTS BY FUNDING SOURCE ..... 66

# FIGURES


| Figure | | Page |
|---|---|---|
| IV.1 | DISTRIBUTION OF HOURS BY PERIOD | 28 |
| IV.2 | DISTRIBUTION OF EDUCATION HOURS BY PERIOD | 28 |
| IV.3 | DISTRIBUTION OF DEVELOPMENT HOURS BY PERIOD | 29 |
| IV.4 | DISTRIBUTION OF COMMUNITY SERVICE HOURS BY PERIOD | 29 |
| IV.5 | REASONS FOR LIMITED PARTICIPATION BY DISENCHANTED ENROLLEES | 33 |
| IV.6 | REASONS FOR STOPPING PARTICIPATION | 33 |
| IV.7 | REASONS FOR LIMITED PARTICIPATION BY ALL ENROLLEES WHO LIMITED THEIR PARTICIPATION | 34 |

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# EXECUTIVE SUMMARY

From July 1995 through September 2001, the U.S. Department of Labor (DOL) and The Ford Foundation (Ford) operated a demonstration of the Quantum Opportunity Program (QOP). QOP offered intensive and comprehensive services to help at-risk youth graduate from high school and enroll in postsecondary education or training. The QOP demonstration included several features of Workforce Investment Act (WIA) youth programs, and findings from the demonstration might provide some insight about the implementation challenges that such WIA programs will encounter and the potential effectiveness of those programs.

The QOP demonstration targeted youth with low grades entering high schools with high dropout rates. Randomly selected eligible youth were enrolled in QOP and served even if they transferred to other schools, dropped out of school, became incarcerated, or became inactive in QOP for a long time. QOP's primary goals were to increase the rates of high school graduation and enrollment in postsecondary education or training. Its secondary goals were to improve high school grades and achievement test scores and to reduce risky behaviors, such as substance abuse, crime, and teen parenting.

QOP was mainly an after-school program providing case management and mentoring, supplemental education, developmental activities, community service activities, supportive services, and financial incentives. These services were provided year-round for five years to enrollees who had not graduated from high school, and were designed to be comprehensive enough to address all barriers to success and to be intensive. The program model specified roughly 15 to 25 enrollees per case manager, and it prescribed an annual participation goal of 750 hours for each enrollee who had not graduated. From graduation to the end of the demonstration, enrollees who had graduated received limited services—some mentoring and assistance with enrolling in postsecondary education or training.

Community-based organizations (CBOs) in seven sites operated QOP demonstration programs. Five sites—Cleveland, Fort Worth, Houston, Memphis, and Washington, D.C.—were funded by DOL. Four of the five served 100 youth each, and the Washington, D.C., site served 80 youth. The other two sites—Philadelphia and Yakima—served 50 youth each with funding from Ford. DOL has also funded an evaluation of the QOP demonstration. By the end of the demonstration, enrollees were in a variety of statuses, including attending college or another postsecondary training program, still attending high school, attending a general educational development (GED) certification program, working after finishing high school, and working or unemployed after dropping out of high school.

The purpose of this report is to present the short-term impacts of QOP. To estimate impacts, we translated each program goal, such as high school graduation, into a quantifiable outcome, such as whether a youth graduated from high school. We measured each outcome for a group of youth enrolled in QOP and a group of statistically identical youth, called the control group. We formed the QOP group and the control group at the start of the demonstration by randomly assigning each youth eligible for the program to one group or the other. All members of the QOP group were enrolled in QOP.

Members of the control group were not allowed to participate in QOP and, thus, show what would have happened to the enrollees had they not been enrolled.

The impact of QOP on the enrolled youth is the difference between the average outcome for the group of QOP enrollees and the average outcome for the control group. The impacts are short-term impacts because we estimated them from data collected during the fourth and fifth years of the demonstration, that is, before the demonstration was over and when many youth were either still attending high school or had only recently graduated. Longer-term impacts, which may be a more appropriate basis for policy decisions, might be more or less beneficial than the short-term impacts presented in this report. To measure longer-term impacts, DOL is having us collect data in fall 2002 and fall 2004. The fall 2002 data collection is roughly seven years after the youth in the demonstration sample entered the ninth grade and two years after the end of the QOP demonstration.

## The QOP Target Group and Program Model

The target group in the QOP demonstration was youth entering the ninth grade in fall 1995 (1996 in the Washington, D.C., site) who met the following criteria:

- Began the ninth grade at a high school selected for the QOP demonstration. Each high school had a dropout rate of 40 percent or more.
- Were not repeating the ninth grade.
- Were not so physically disabled or learning disabled that participation in the program would not have been appropriate, as determined by the school.
- Had a grade point average (GPA) below the 67$^{th}$ percentile among the students meeting the first three requirements at the participating high school. (The GPA was calculated from grades received in the eighth grade.)

The QOP model consisted of four primary components: (1) case management and mentoring, (2) education, (3) developmental activities, and (4) community service. Secondary aspects of the program model included financial incentives—stipends, accrual accounts, enrollee bonuses, and staff bonuses—and supportive services—snacks, transportation assistance, and other services as needed. Compared to the models for most other youth programs, the QOP model required more intensive case management and mentoring in four ways:

1. Enrollees were to have greater access to case managers and were to be involved in more program activities for longer periods of time. Each case manager was to have a caseload of approximately 15 to 25 enrollees. The QOP model set a target of 250 hours per year for activities in each of three service components—education, developmental activities, and community service—for a total of 750 hours per year until an enrollee graduated from high school. Enrollees who took full advantage of QOP received services for five years. Most case managers were available during off hours for enrollees to call in emergencies.
2. Enrollees were to interact with case managers for longer periods of time because program eligibility was not contingent on enrollee behavior. Youth continued to be enrolled in QOP even if they transferred to another school, dropped out of school, became incarcerated, or

became inactive in QOP for a long time. In contrast to some other youth programs, QOP did not accept or retain only those youth who were sufficiently motivated to apply and actively participate. QOP's approach of enrolling all randomly selected eligible youth reflected the program's philosophy that the least-motivated youth might benefit the most from receiving help.

3. Enrollees were to receive more comprehensive services because the scope of case management called for addressing all barriers that enrolled youth faced. Case managers either addressed a barrier directly—by arranging transportation to program activities, for example—or referred the enrollee to another community resource, such as a substance abuse treatment program.

4. Enrollees were to receive services throughout school vacations and the summer. Enrollees who failed a class during the school year were encouraged to attend summer school. Case managers assisted other enrollees who were age 16 or older to find summer jobs. Developmental and community service activities continued throughout the summer for all enrollees.

Each of the other three components of the QOP model was geared toward achieving a specific program goal.

- ***Educational activities*** were intended to improve academic achievement, increase the likelihood of completing high school, and increase the likelihood of going on to college or some other postsecondary training program. After an academic assessment, which formed the basis of an individual education plan, educational services were to consist of one-on-one tutoring and computer-assisted instruction in specific coursework as well as in basic reading and mathematics. Educational services also included visiting nearby college campuses and other activities designed to promote awareness of and planning for college or other postsecondary training.

- ***Developmental activities*** were designed to reduce risky behaviors. They also promoted cultural awareness and provided recreation.

- ***Community service activities***, such as visiting the residents of a local nursing home or volunteering at a local food bank, were designed to help youth develop a sense of responsibility for the quality of life of others in their neighborhood.

The QOP model addressed numerous barriers to success by specifying that supportive services were to be provided either directly or indirectly through referrals to other resources in the community. QOP case managers referred enrollees to community health and mental health services; summer jobs programs; and local agencies that provide housing, food, income support, or child care.

In addition to supportive services, QOP provided youth with three types of financial incentives to attend program activities. The first was a stipend of approximately $1.25 for every hour devoted to educational activities, developmental activities that were not purely recreational, and community service. A matching amount was deposited in an accrual account and promised to the enrollee when he or she earned a high school diploma or GED certificate and enrolled in college, a certified apprenticeship

program, an accredited vocational/technical training program, or the armed forces. Enrollees in some sites also received bonuses for completing major program activities.

QOP also provided financial incentives to program staff. The two Ford-funded sites compensated staff entirely through incentive payments based on the time enrollees spent on program activities, while some DOL-funded sites provided bonuses to staff based at least partly on enrollee participation.

## Evaluation Methods

At the start of the demonstration, we formed the QOP group and the control group by randomly assigning each of the nearly 1,100 youth eligible for the program to one group or the other. In the spring of the fourth academic year of the demonstration, we interviewed enrollees and control-group members in-person. The survey collected data on risky behaviors and factors that assist a youth in resisting negative influences in his or her social environment. At the same time, we administered achievement tests in reading and mathematics. Seven to ten months later, we conducted a telephone survey covering high school graduation, postsecondary activities, risky behaviors, and (for the enrollee group) attitudes toward QOP. Shortly thereafter, we requested transcripts from the high schools that sample members had attended since the beginning of the demonstration. From information provided by QOP staff, we measured how much enrollees participated in QOP.

After conducting the two surveys, administering the achievement tests, and collecting transcripts, we measured the impact of QOP on an outcome by subtracting the mean outcome for the control group from the mean outcome for the QOP group. Because the available data were obtained before the end of the demonstration and when many youth were either still attending high school or had only recently graduated, the impacts estimated from those data and presented in this report should be interpreted as short-term impacts for many of the outcomes considered, as noted above. The data that we collect in 2002 and 2004 will reveal whether QOP's longer-term impacts are more or less favorable than its short-term impacts.

## Participation in QOP

Despite QOP's goal of engaging a broad cross-section of eligible youth, most enrollees attended relatively few program activities.

- Enrollees spent an average of 174 hours per year on QOP activities—23 percent of the annual goal of 750 hours—through the first four years of the demonstration.

- Enrollees spent an average of 72 hours per year on education (29 percent of the goal), 76 hours on developmental activities (30 percent of the goal), and 26 hours on community service (11 percent of the goal).

- The average time spent on QOP activities fell steadily from 247 hours in the first year of the demonstration to 89 hours in the fourth year, while the fraction of enrollees spending no time at all on QOP activities rose steadily from 1 percent to 36 percent.

- The most dedicated enrollees—those spending at least 1,300 hours on QOP activities—tended to have higher grades at baseline (eighth grade), be younger when entering the ninth

grade, be in families receiving welfare, and be in families headed by a single parent. The most disenchanted enrollees—those spending 100 or fewer hours on QOP activities—tended to have lower baseline grades, be male, not speak English at home, and be older when entering the ninth grade.

- The most disenchanted enrollees reported being uninterested in QOP activities or having other after-school activities such as playing a sport, working, or caring for other family members.

## Short-Term Impacts of QOP

### Primary Outcomes: High School Completion and Postsecondary Education or Training

- **QOP increased by a statistically significant seven percentage points the likelihood that enrollees graduated from high school with a diploma.**

- **QOP increased the likelihood of engaging in postsecondary education or training, although the size and statistical significance of the impact depends on how this outcome was measured and how the impact was estimated.**

  - QOP significantly increased by six percentage points the likelihood of engaging in postsecondary education or training when education or training was defined to include college attendance, vocational or technical school attendance, apprenticeship enrollment, and armed forces enlistment. The impact became smaller and insignificant when this measure was either narrowed to include only college attendance or broadened to include employment. It also became smaller and insignificant when we used regression methods to adjust for random differences between the baseline characteristics of the QOP group and the control group.

  - When we included acceptance into college—in addition to current attendance at college—in the definition of postsecondary education or training, QOP significantly increased the likelihood of engaging in postsecondary education or training by six to nine percentage points for all but one measure of postsecondary activity.

### Secondary Outcomes: High School Performance, Risky Behaviors, and Resiliency Factors

- **QOP did not significantly improve enrollee performance while in high school.**

  - QOP did not significantly raise reading or mathematics achievement test scores or high school grades.

  - QOP did not significantly increase the number of credits earned by enrollees or reduce disciplinary actions taken against enrollees in high school.

- **QOP did not significantly reduce risky behaviors.**

- QOP did not significantly reduce any risky behavior, including gang activity, crime, and teen parenting.

- According to data from the in-person survey, QOP significantly increased by seven percentage points the fraction of enrollees who had a drink and the fraction who used an illegal drug in the 30 days before the survey. However, some evidence suggests that there were differences between QOP enrollees and control-group youth in the accuracy with which they reported risky behaviors. Those differences might have contributed substantially to the estimated detrimental impacts on drinking and drug use. That QOP might not have increased drinking and drug use is also suggested by data from the telephone survey. According to those data, QOP had beneficial—but not significant—impacts on drinking and drug use.

- **QOP significantly increased one resiliency factor.**

  - QOP significantly increased by 31 percentage points the fraction of enrollees reporting participation in a special program that helped them. Nevertheless, slightly less than half (47 percent) of QOP enrollees reported participating in "special programs other than your normal high school classes …[that try] to help students stay in school, make good grades, stay away from drugs, prepare for work or college, and make good decisions in life." This might reflect the fact that participation in QOP activities fell substantially short of the program's goal, especially by the fourth year of the demonstration when we asked the youth in the evaluation sample about their participation in special programs.

- QOP did not significantly increase the likelihood that an enrollee perceived himself or herself as being positively influenced by a caring adult. It also did not significantly improve resiliency factors such as having an optimistic outlook on the future or believing that risky behaviors are wrong.

### Short-Term Impacts on Subgroups

- **QOP was more beneficial for enrollees in the middle of the eligible grade distribution than for enrollees at the top or bottom of the distribution.**

  - QOP had several significant impacts on enrollees in the middle third of the eligible grade distribution, and all of those impacts were beneficial. They included a 14-percentage-point increase in the likelihood of receiving a diploma, a 13-percentage-point increase in the likelihood of college attendance or acceptance, and an 8-percentage-point decrease in the likelihood of having a child.

  - QOP had both significant beneficial and detrimental impacts on enrollees in the bottom third of the distribution. It increased by 9 percentage points the likelihood of engaging in postsecondary education or training and decreased by 11 percentage points the likelihood of ever being arrested or charged with a crime. However, QOP also increased by 14 percentage points the likelihood of using an illegal drug.

  - QOP had only one significant impact—a detrimental impact—on enrollees in the top third of the distribution. It increased by eight percentage points the likelihood of binge drinking.

- QOP had significant beneficial impacts on both older and younger enrollees, and it did not consistently benefit one age group more than the other. (The older enrollees were over age 14 when they entered the ninth grade, whereas the younger enrollees were age 14 or younger.) The impact on younger enrollees was significantly different from the impact on older enrollees for just one outcome. QOP decreased by nine percentage points the fraction of younger enrollees who had a child. This impact was significantly different from both zero and the (insignificant) six-percentage-point increase in the fraction of older enrollees who had a child.

- Some of QOP's impacts on females and some of its impacts on males were significantly different from zero. Although the significant impacts were beneficial for females and detrimental for males, QOP's impact on females was significantly different from its impact on males for only one key outcome, the likelihood of engaging in postsecondary education or training, attending high school or a GED class, or working.

**Short-Term Impacts by Site**

- **QOP's impacts varied from site to site.** And, only one of the seven sites—the Cleveland site—had significant beneficial impacts and no significant detrimental impacts. The Cleveland site significantly increased the likelihood of graduating from high school, significantly increased the likelihood of attending or being accepted by a college, and significantly decreased the likelihood of binge drinking.

- **The impacts for the whole QOP demonstration were substantially—but not entirely—attributable to the impacts of the Philadelphia site alone or the Philadelphia and Yakima sites, the Ford-funded sites, together.**

  - The five DOL-funded sites together had one significant impact—they increased by seven percentage points the likelihood that a QOP enrollee graduated from high school. This impact on one of QOP's primary outcomes was not significantly different from the impact for the two Ford-funded sites.

  - The Ford-funded sites had four significant beneficial impacts: a 2-percentile-point increase in the mathematics achievement test score, a 14-percentage-point increase in the likelihood of engaging in postsecondary education or training, a 17-percentage-point increase in the likelihood of engaging in postsecondary education or training or working at a good job, and a 14-percentage-point decrease in the likelihood of having a child.

  - The Ford-funded sites also had three significant detrimental impacts: 17-, 14-, and 16-percentage-point increases in the likelihood of engaging in binge drinking, using an illegal drug, and committing a crime, respectively. As discussed above, however, these detrimental impacts on risky behaviors might not have been attributable to QOP.

## Conclusions

- QOP achieved some short-term success in meeting its two primary goals of raising rates of high school completion and enrollment in postsecondary education or training. It had statistically significant beneficial impacts of modest size on at least some measures of both outcomes.

- QOP was not successful in meeting its secondary goals of improving grades and achievement test scores and reducing risky behaviors.

- QOP was not an effective resiliency factor. Although it significantly increased the fraction of enrollees participating in a program designed to help youth succeed in life, QOP did not improve enrollee's optimism about life or attitudes toward risky behaviors, and it did not reduce their risky behaviors.

- QOP was more beneficial in the short-run for enrollees in the middle of the eligible grade distribution than for enrollees at the top or bottom of the distribution.

- QOP's impacts varied from site to site, and the impacts for the whole QOP demonstration were substantially, but not entirely, attributable to the impacts of the Philadelphia site alone or the Philadelphia and Yakima sites (the Ford-funded sites) together. The DOL-funded sites significantly increased the likelihood of graduating from high school, one of QOP's primary goals, but had no other statistically significant impacts.

- Participation in QOP activities was substantially less than the program goal and declined steadily throughout the demonstration.

As noted, the impacts presented in this report are short-term impacts that we estimated from data collected during the fourth and fifth years of the demonstration, that is, before the demonstration was over and when many youth were either still attending high school or had only recently graduated. Longer-term impacts, which may be a more appropriate basis for policy decisions, might be more or less favorable than the short-term impacts. To measure longer-term impacts, DOL is having us collect data in fall 2002 and fall 2004. The fall 2002 data collection is roughly seven years after the youth in the demonstration sample entered the ninth grade and two years after the end of the QOP demonstration.

# CHAPTER I

# INTRODUCTION

From July 1995 through September 2001, the U.S. Department of Labor (DOL) and The Ford Foundation (Ford) operated a demonstration of the Quantum Opportunity Program (QOP). QOP was mainly an after-school program providing at-risk high-school-age youth with intensive case management and mentoring, supplemental academic education, developmental activities, community service activities, supportive services, and financial incentives.[1]

The QOP demonstration served a single cohort of youth from the beginning of the ninth grade in the fall of 1995 through the fall of 2000.[2] A local community-based organization (CBO) in each of six inner-city communities and one rural community implemented and operated a QOP program. Each CBO teamed with from one to three high schools, and had 50, 80, or 100 youth enrolled in the program. By the end of the demonstration, enrollees were in a variety of statuses, including attending college or another postsecondary training program, still attending high school, attending a general educational development (GED) certification program, working after completing high school, and working or unemployed after dropping out of high school.

The primary objectives of the demonstration were to increase the likelihood of high school graduation and to increase enrollment in postsecondary education or training. Its secondary objectives were to increase academic achievement while in high school and to reduce risky behaviors, such as substance abuse, crime, and teenage childbearing.

The purpose of this report is to present the short-term impacts of the QOP demonstration. To obtain impact estimates, we randomly assigned each youth who was eligible for QOP to either a QOP group or a control group. Youth in the QOP group were enrolled in QOP and allowed to participate in program activities while youth in the control group were not. Thus, the youth in the control group show what would have happened to the QOP youth had the QOP youth not been enrolled in QOP. For each of many outcomes that pertain to the goals of QOP, such as high school graduation and engagement in postsecondary education or training, we estimated an impact of QOP by subtracting the average outcome for youth in the control group from the average outcome for youth in the QOP group.

Impacts reported here are short-term because we estimated them from data collected before the demonstration was over and when many youth were either still attending high school or had only recently graduated. We conducted an in-person survey and administered reading and mathematics

[1] At-risk youth are at a greater risk of substance abuse, criminal activity, teenage childbearing, not completing high school, or not enrolling in a postsecondary education or training program, compared to the average high-school-age youth in the United States.

[2] All events occurred one year later in the Washington, D.C., site.

achievement tests near the end of the fourth academic year of the demonstration. During the fifth academic year, we conducted a telephone survey and collected high school transcripts. While the data enabled us to measure impacts on, for example, substance abuse and crime while sample members were still of or very close to high school age, they do not allow us to measure impacts on substance abuse and crime after the youth became young adults. Similarly, some sample members who had just graduated from high school at the time of data collection may not yet have enrolled in college or another postsecondary education or training activity, whereas those who had enrolled at that time may have stopped their training after a few months. Furthermore, about 16 percent of the youth in the demonstration were still in high school when they were last interviewed; therefore, the data analyzed for this report do not indicate whether these youth successfully completed high school and then engaged in postsecondary education or training.

To obtain longer-term impact estimates, DOL is having us conduct two additional telephone surveys in fall 2002 and fall 2004. The fall 2002 data collection is roughly seven years after the youth in the demonstration sample entered the ninth grade and two years after the end of the QOP demonstration. After all of the youth in the demonstration sample have left high school—with or without graduating—we might find that QOP's impacts on high school completion and postsecondary activities, for example, are different from the impacts presented in this report. The longer-term impacts, which may be a more appropriate basis for policy decisions, might be higher or lower than the short-term impacts. The importance of estimating longer-term impacts is illustrated by the National Job Corps Study, which obtained longer-term impacts that were substantially more favorable than the short-term impacts (Schochet et al. 2000, 2001).

## PLAN OF THE REPORT

The report is organized as follows: Chapter II discusses the QOP program model, including how QOP fits into the spectrum of youth programs, the history of QOP, and the organizational structure of the demonstration. Chapter III summarizes the methods used to estimate program impacts. The methods are presented in detail in the several appendices listed below. Chapter IV describes the degree to which enrolled youth participated in QOP activities.

Chapters V though VII present the short-term impacts of the QOP demonstration on each of several sets of outcomes. Chapter V covers high school completion and postsecondary activities; Chapter VI examines risky behaviors and resiliency factors; and Chapter VII presents impacts on subgroups of enrollees as well as impacts by demonstration site.

The report concludes with a set of appendices that provide comprehensive documentation of our methods. The documentation is designed to enable other analysts to replicate our findings.

- Appendix A describes how we obtained a sample of youth for the evaluation and how we conducted random assignment.

- Appendix B documents the baseline database. Given that DOL elected not to fund a baseline survey, baseline characteristics are taken from eligibility data and from later surveys for those demographic characteristics that do not change.

- Appendix C presents the survey questionnaires, achievement tests, and school records-collection protocol as well as the fielding procedures and response rates for each data-collection activity.

- Appendix D defines each outcome variable and the subgroups for which impacts are estimated.

- Appendix E presents the technical details pertaining to how we computed weights for the QOP demonstration sample, estimated difference-of-means impacts, and estimated the variances of those impacts.

- Appendix F presents our findings from assessing the sensitivity of the impact estimates to alternative estimation approaches.

- Appendix G presents QOP's impacts on participants, the subgroup of enrollees who attended some QOP activities.

A companion report (Maxfield et al. 2003a) documents how well the QOP program model, described in Chapter II, was implemented in each of the seven demonstration sites and, thus, provides a context for interpreting the program impacts presented in this report. Another companion report (Maxfield et al. 2003b) summarizes our findings pertaining to program implementation and short-term impacts.

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# CHAPTER II

# WHAT IS QOP?

The description of the QOP model in this chapter covers the program's target population, the components of the program model, a brief comparison of QOP to other youth programs, a short history of the program, and the institutional structure of the demonstration.

## TARGET POPULATION AND SAMPLE SELECTION

The target group in the QOP demonstration was youth entering the ninth grade in fall 1995 who met the following criteria:

- Began the ninth grade at a high school selected for the QOP demonstration. Each high school had a dropout rate of 40 percent or more. (The dropout rate was defined as the proportion of students entering ninth grade who had not earned a diploma or a GED four years later.)

- Were not repeating the ninth grade.

- Were not so physically disabled or learning disabled that participation in the program would not be appropriate, as determined by the school.

- Had a grade point average (GPA) below the 67$^{th}$ percentile among the students meeting the first three requirements. (The GPA was calculated from grades received in the eighth grade.)

A sample of youth was drawn from a list of students meeting the above criteria in each school participating in the program.[3] Sampling was necessary because, in most sites, the number of eligible youth exceeded the number of slots available for the demonstration evaluation, which was the number of program slots plus a roughly equal number of control-group slots. Sampled youth were aggressively recruited to participate in the study, and about 98 percent of those who were located agreed to participate.[4] Youth who agreed to participate were randomly assigned to a QOP group or to a control group. The high recruitment rate meant that the youth in the evaluation were representative of all youth meeting the eligibility criteria, not simply those who were motivated, had strong self-esteem, and were

[3] In two schools, we selected all eligible youth for the evaluation.

[4] Staff could not locate seven percent of sampled eligible youth, reporting that most of these individuals did not really attend the QOP schools and were erroneously on school enrollment lists.

optimistic about the future—characteristics likely to be associated with seeking out and volunteering for a program such as QOP.

The fact that youth in the evaluation are representative of all eligible youth—rather than only the most motivated youth—is an important feature of the demonstration. One of the guiding principles of QOP is that youth with low-self esteem, little motivation, and a pessimistic outlook may be most in need of the program. But these youth are least likely to make an effort to enroll in a program like QOP. Had QOP recruiting efforts depended only on the youth themselves to take the initiative to seek out the program office and apply, the program caseload would have consisted of youth who were motivated to improve their lives. This type of recruiting is common among other youth programs but contrary to the ideology of QOP.

Most of the youth in the QOP demonstration were 13 to 15 years old when the demonstration began and 18 to 20 years old when it ended. The preponderance of youth were members of low-income families and were black, Hispanic, or both. The group included youth who, at some point during the demonstration period, were in special education programs, had disabilities, were teen parents, were involved in the juvenile justice system, did not attend high school, were one or more grades behind in basic skill levels, or were undocumented residents.

## OVERVIEW OF PROGRAM COMPONENTS AND SERVICES

The QOP program model consisted of four primary components: (1) case management and mentoring, (2) education, (3) developmental activities, and (4) community service. Secondary aspects of the program model included financial incentives—stipends, accrual accounts, enrollee bonuses, and staff bonuses—and supportive services—snacks, transportation assistance, and other services as needed. This section describes each component of the program model. A description of how well the model was implemented at each of the demonstrations sites may be found in Maxfield et al. (2003). As we learned from annual site visits, annual QOP conferences, and conference calls with QOP staff, two sites implemented a version of QOP that deviated substantially from the program model, and the other five sites implemented versions that deviated moderately from the model.

### Intensive Case Management and Mentoring

Intensive case management and mentoring was the central program component. Case management included assessing the needs of each enrolled youth and structuring a service mix appropriate to meeting those needs. With mentoring, a case manager was to establish a personal relationship with each youth. QOP regarded case management and mentoring as inseparable activities to be undertaken by one person.

Compared to the models for most other youth programs, the QOP model required more intensive case management and mentoring in four ways:

1. Enrollees were to have greater access to case managers and were to be involved in more program activities.

2. Enrollees were to interact with case managers for longer periods of time because program eligibility was not contingent on enrollee behavior.

3. Enrollees were to receive more comprehensive services because the scope of case management called for addressing all barriers facing enrolled youth.

4. Enrollees were to receive services throughout school vacations and the summer.

Each of these is discussed below.

**Greater Access to Case Managers and More Involvement in Program Activities Were Provided to Enrollees.** QOP CBOs employed a case manager for approximately every 15 to 25 enrollees. Case managers were generally available to enrollees every weekday, and many were accessible on one weekend day. Most case managers were also available to their enrollees by telephone or pager during off hours to respond to urgent situations confronting their youth.

Absent staff turnover and the rare case of voluntary reassignment of an enrollee to a different case manager, each enrollee remained with the same case manager for the first four years of the demonstration. During the final year, services were reduced and focused on those youth who had not yet completed high school.[5] In most instances, case managers' caseloads changed from the fourth to the fifth year of the demonstration.

Enrolled youth were expected to spend large amounts of time engaged in QOP activities. The program set a participation goal for each enrolled youth at 750 hours per year until the enrollee graduated from high school, or more than 14 hours per week on average throughout the year. One-third of that time was to be spent on educational activities, including tutoring and computer-assisted instruction; one-third on community service; and one-third on developmental activities, including decision-making skills, cultural activities such as visiting museums, and lifestyle-related activities such as family planning seminars. In most sites, a typical schedule included meetings with case managers, most of whom were available at the school during the school day; program activities at the CBO's facility from 3 p.m. to 6 p.m. each weekday; and program activities for half a day on most weekends.

It is important to emphasize that the target of 750 hours per year overall was a feature of the program model for the QOP demonstration. As we report in Chapter IV, the average enrollee spent 23 percent of the target number of hours on QOP activities.

**Continuing Program Eligibility Was Not Contingent on Enrollee Behavior or Life Circumstances.** Unlike continuing eligibility for most programs of its type, continuing eligibility for QOP was not contingent on the youth's behavior, residence, or health status. Other youth programs limit continuing eligibility to youth living in a specific neighborhood, to in-school youth or out-of-school youth, to youth in or not in the criminal justice system, or to youth who complete some minimum number of program activities.[6] In contrast, QOP continued to serve youth in a wide variety of circumstances, including those who:

- ***Dropped out of school***. Program staff attempted to get dropouts to re-enroll in school or, failing that, to earn a GED.

[5] Enrollees who had graduated from high school received some mentoring and assistance in enrolling in postsecondary education or training between graduation and the end of the fifth year of the demonstration.

[6] Where QOP fits within the broad spectrum of youth programs is presented in the next section.

- ***Moved to a different school or neighborhood***. Case managers continued to provide services to those who moved to another neighborhood in the metropolitan area, to make one-on-one visits to those who moved outside the metropolitan area but remained within driving distance, and to call those who moved beyond driving distance. However, the farther away an enrollee moved, the less intense services became.

- ***Became incarcerated***. Case managers visited and called incarcerated enrollees and sent them educational materials that they could complete.

- ***Became ill or disabled***. Case managers visited and called enrollees who were hospitalized or confined to their homes because of illness or disability. Case managers also adapted program activities to enable such enrollees to particpate.

- ***Became inactive***. Once a youth was enrolled in QOP, a program slot was held for that person for the full five years of the demonstration regardless of how much time he or she spent in program activities. For example, some enrollees were "active" in the 9th grade (spent a large amount of time in program activities) but became "inactive" in the 10th and 11th grades (did not participate in program activities). Case managers continually tried to maintain contact with inactive enrollees and to re-engage them in the program. Consequently, some youth who became inactive became active again in subsequent years.

The dual policy of unconditional eligibility and continuing enrollment was summarized by the program motto, "Once in QOP, Always in QOP." This motto was based on the philosophy that the need for mentoring may not diminish and indeed may increase when an enrollee drops out of school, moves, or becomes incarcerated, disabled, ill, or disenchanted with the program. This philosophy also reflects the fact that the lives of many disadvantaged youth pass through several of these states during their high school years. For example, an enrollee might be in school and actively participating in the program in the ninth grade, then drop out of school and become inactive in the program, move several times, become incarcerated, and finally become active in the program again at the age of 18 or 19 as he or she works toward a GED certificate. Throughout, the case manager was expected to maintain, or attempt to maintain, a stabilizing presence in the youth's life.

**Case Management and Mentoring Were to Address All Barriers.** QOP case management and mentoring was more intense than in many other youth programs because of the depth and breadth of the youths' relationships with their case manager. The relationships were intended to be personal, long-term, and comprehensive. While many QOP activities were conducted in a group setting, case managers spent one-on-one time with every enrollee whom they could locate. Case managers were expected to help enrollees overcome a broad range of barriers to achieving the program goals. Common barriers included low educational achievement, alienation from school, substance abuse, physical and mental health problems, gang membership, criminal activities, teen parenthood, an unstable or abusive family environment, and insufficient funds to pay for necessities. For some enrollees, these barriers were compounded by the fact that their parents or guardians faced similar problems.

**Services Were to Be Provided Throughout School Vacations and the Summer.** Case managers encouraged and made arrangements for enrollees who failed a class during the school year to attend summer school. Case managers assisted other enrollees who were age 16 or older to find summer jobs. Developmental and community service activities continued throughout the summer for all enrollees.

## Educational, Developmental, and Community Service Activities

In addition to intensive case management and mentoring, QOP offered educational, developmental, and community service activities. Each of these components was geared toward achieving a specific program goal.

- ***Educational activities*** were intended to improve academic achievement, increase the likelihood of completing high school, and increase the likelihood of going on to college or some other postsecondary training program. After an academic assessment, which formed the basis of an individualized education plan, educational services were to consist of one-on-one tutoring and computer-assisted instruction in specific coursework as well as in basic reading and mathematics. Educational services also included visiting nearby college campuses and other activities designed to promote awareness of and planning for college or other postsecondary training.

- ***Developmental activities*** were designed to reduce risky behaviors. They also promoted cultural awareness and provided recreation. A list of developmental activities is presented in Table II.1.

- ***Community service activities***, such as visiting the residents of a local nursing home or volunteering at a local food bank, were designed to help youth develop a sense of responsibility for the quality of life of others in their neighborhood.

## Supportive Services and Financial Incentives

The QOP model addressed numerous barriers to success by specifying that supportive services were to be provided either directly or indirectly through referrals to other resources in the community. Most QOP sites provided afternoon snacks and transportation to program activities. QOP case managers referred enrollees to community health and mental health services; summer jobs programs; and local agencies that provide housing, food, or income support.

In addition to supportive services, QOP provided youth with three types of financial incentives to participate in program activities. The first was a stipend of approximately $1.25 for every hour devoted to nonrecreational program activities, such as time spent being tutored and time spent on community service activities. A matching amount was deposited in an accrual account and promised to the enrollee when he or she earned a high school diploma or GED certificate and enrolled in college, an apprenticeship program certified by DOL, an accredited vocational/technical training program, or the armed forces. The purpose of the accrual accounts was to provide financial support for college or other postsecondary training and to teach enrollees about planning, saving, and investing for the future. By the end of the demonstration, accrual account balances ranged from a few hundred dollars to nearly $10,000, with most being in the range of $1,000 to $3,000. Final payments were made directly to the enrollee rather than to the postsecondary institution or to the enrollee's parents.[7] Bonuses awarded by some sites for the completion of major program activities were the third type of financial incentive provided to enrollees.

[7] While accrued funds were usually paid directly to the enrollee, case managers, with written support from DOL, retained the option to make exceptions to this procedure if they felt direct payment would not be appropriate.

TABLE II.1

DEVELOPMENTAL ACTIVITIES OFFERED BY QOP DEMONSTRATION SITES

| | | |
|---|---|---|
| Lifeskills activities/discussion topics | Public/Private Ventures life skills curriculum<br>Contraception, family planning, and abstinence<br>Budgeting<br>Money management<br>Financial planning<br>Menu planning/grocery shopping<br>Business ownership<br>Personal hygiene<br>Nutrition<br>Overcoming adversity<br>Conflict resolution training<br>Managing anger<br>Avoiding drug abuse | Gang prevention<br>CPR training<br>Peer mediation training<br>Behavioral skills<br>Self-esteem<br>Sexual harassment<br>Sexual abuse<br>Dating behavior and decision making<br>Date rape<br>Male parenting roles<br>Importance of education<br>Current magazine reading assignments<br>Prison tours<br>Decision-making/problem-solving activities |
| Pre-employment training | World-of-work basic skills<br>Telephone etiquette<br>Mock interviews<br>Resume writing workshops<br>On-site corporate tours<br>Career exposure through guest speakers | Summer placements in:<br>Hospitals, nursing homes<br>Federal, state, and county offices (e.g., health department, park service)<br>Day care centers<br>Local schools<br>Restaurants<br>Grocery stores<br>Social service agencies (Goodwill, United Way) |
| Cultural activities | Museums<br>Theater<br>Ballet<br>Symphonies, concerts<br>Civic events<br>Zoo<br>State capitol tours | Music and dance lessons<br>Public lectures<br>History videos<br>Arts and crafts projects<br>Fund raisers<br>Workshops on topics such as African heritage, AIDS awareness, volunteerism, civic participation, entrepreneurship<br>Classes in cooking, photography, arts and crafts |
| Recreational activities | Movies<br>Ice skating<br>Bowling<br>Swimming<br>Sailing<br>Golfing<br>Mountain biking<br>Amusement/water parks | Haunted houses<br>Board/computer games<br>Local fairs<br>Picnics<br>Attending sporting events<br>Pizza lunches<br>Restaurant dinners |

SOURCE: Annual site visits.

QOP also provided financial incentives to program staff. The two Ford-funded sites compensated staff entirely through incentive payments based on the time enrollees spent on program activities, while some DOL-funded sites provided bonuses to staff based at least partly on enrollee participation.

## WHAT TYPE OF A YOUTH PROGRAM IS QOP?

Understanding QOP requires understanding how it compares with other types of youth programs. Youth programs are broadly defined here as public programs intended to solve a social problem experienced by substantial numbers of individuals from age 12 through 21. This definition excludes programs not open to the public, programs targeting other age groups, programs designed to address problems not considered to be social, and programs targeting small numbers of individuals. It also excludes defunct federal youth programs, such as the Civilian Conservation Corps of the late 1930s.

Of the many programs that would fall within our broad definition, we focus on programs sponsored by the federal government that are designed to help at-risk youth. For fiscal year 1998, the U.S. General Accounting Office counted 117 federal youth programs with collective appropriations of more than $4 billion. Among these programs, which were sponsored by 15 federal departments and agencies, 45 provided mentoring and 35 provided academic tutoring (U.S. General Accounting Office 1999).

QOP can be placed in the spectrum of other youth programs in terms of the social "unit" it treats, its goals and service mix, its target population, the relationship between case managers and enrollees, and its cost. The social unit that QOP treated was the youth, as opposed to other relevant social units such as the school, the family, the labor market, and the community. The QOP designers focused on youth because they interpreted the problem of poverty and career failure from the human capital perspective. The human capital perspective comes from the field of economics and assumes that if the skills of a youth are improved, he or she will be more employable and better able to avoid poverty.

Thus, QOP can be viewed in terms of the social units that it does not treat:

- ***QOP was not a school-reform program***, in which the treated unit is the school, school district, or state education agency. Although QOP provided tutoring and computer-assisted instruction, it was not designed to influence the structure, policies, or operation of the high schools with which local QOP programs were associated.

- ***QOP was not a family counseling or therapy program***. While case managers sought to involve the parents of enrollees and communicated regularly with many of them, QOP was not designed to address the problem of poverty and career failure by providing counseling or therapy to troubled families.

- ***QOP did not focus on employers***. QOP addressed the supply side of the labor market, that is, the skills that enrollees bring to the labor market as young adults. It did not address the demand side of the labor market, as does the Work Opportunity Tax Credit program by, for example, offering tax incentives for employers to hire disadvantaged persons.

- ***QOP was not a community development program***. Although most QOP sites were located within high-poverty communities, QOP was not intended to attract new businesses to the community or to address other social problems on a community-wide basis.

QOP also differed from other programs of its type in its goals and service mix. QOP focused more sharply on educational outcomes and provided more education services than do most other DOL/Employment and Training Administration-sponsored youth programs, which tend to focus on employment outcomes. QOP provided basic education skills as opposed to vocational training, work-readiness training, job search assistance, job development, or direct placement. Under QOP, getting a job right after graduation from high school was not an objective. Instead, QOP was premised on the belief that postsecondary education or training is required for long-term economic self-sufficiency in the modern labor market.

QOP was also more comprehensive than most other federal youth programs. It provided services related directly and indirectly to academic skills; college planning and applications (including financial aid); physical and mental health; substance abuse; conflict resolution; family planning; cultural and ethnic awareness; career awareness and planning; issues related to gang membership and involvement in the criminal justice system; coping with dysfunctional, abusive, or unsupportive family environments; summer jobs; transportation; nutrition; and paying bills in family emergencies.

In addition to its scope of services, QOP differed from other youth programs in the scope of its target population, which was not limited to highly motivated eligible youth. While no youth program is legally mandatory, QOP enrolled all randomly selected eligible youth. Therefore, QOP enrolled many at-risk youth who would not have ended up in such a program had the recruitment procedures been more passive and required an expression of interest in the program from eligible youth, as in many youth programs.

QOP differed from other programs of its type in terms of the relationship between case managers and participating youth. This highly personal, long-lasting connection mirrored the relationship between a teenager and a nurturing, supportive older relative such as an aunt, uncle, or grandparent. Enrollees could confide in their case managers more freely than they might confide in a parent, and case managers could provide guidance on how to handle a situation without risking the traditional parent-teen conflict that often works against the acceptance of such guidance. And like an older relative who has made a commitment to a child, case managers made every attempt to sustain the relationship with youth despite resistance and distance. Case managers acted as advocates by negotiating on behalf of youth with the high school and with criminal justice and other public agencies.

Finally, QOP was more intensive and expensive than most other federal youth programs. QOP provided a case manager for roughly every 15 to 25 enrollees, provided services to each enrollee for five years, set a goal of 750 hours of participation per year until graduation, and cost about $25,000 per enrollee, on average.

## QOP FUNDING AND STRUCTURE

Under the pilot and demonstration authority of the Job Training Partnership Act (JTPA)[8], DOL funded QOP operations in five sites through grants to local public service delivery organizations. For each of the first four years of the demonstration, each site received a grant of $200,000 and was obliged to provide local matching funds of an equal amount, for a total budget of $400,000 per year.[9] In the fifth year, each DOL-funded site received a grant of $200,000 but no local matching funds.

Through a grant to Opportunities Industrialization Centers of America (OICA), The Ford Foundation funded program operations in two demonstration sites as well as technical assistance for program operations in all seven sites. While there was no formal contractual arrangement between DOL and Ford, the two organizations coordinated their activities throughout the demonstration. DOL also funded the evaluation of all seven sites in the demonstration through a contract with Mathematica Policy Research, Inc. (MPR).

The DOL sites were located in Cleveland, Ohio; Fort Worth, Texas; Houston, Texas; Memphis, Tennessee; and Washington, D.C. Each DOL grantee was the public agency that administered JTPA programs in that area. That local public agency was known under JTPA as the service delivery area (SDA). SDAs did not operate QOP directly; instead, each SDA contracted with a single local CBO. Typically, an SDA passed on 80 to 90 percent of the QOP grant to the CBO to reimburse the CBO for program administration and operating expenses. Each CBO in a DOL-funded site hired a QOP coordinator and five case managers to serve 100 enrollees.[10]

The two Ford-funded sites were located in Philadelphia, Pennsylvania, and Yakima, Washington. The structure of the two Ford-funded sites differed in several ways from that of the five DOL-funded sites. OICA operated QOP in Philadelphia directly and had an informal agreement with its local OIC affiliate in Yakima to oversee operations there. The relationship between the Yakima affiliate and the Philadelphia OICA was the same as the relationship between a franchise and its national headquarters. Each Ford-funded site had 50 enrollees, half the number in each DOL-funded site (except Washington, D.C.), and each had three case managers who also had responsibilities for programs other than QOP. Finally, while case managers at DOL-funded sites received a salary, those at Ford-funded sites were compensated through incentive payments based on the time that enrollees spent on program activities.

As noted above, each CBO teamed with between one and three high schools, which participated in QOP in several ways. First, they provided the population of eligible youth from which the evaluation sample was selected. Second, they gave case managers access to enrollees' teachers for monitoring enrollees' academic performance. Third, with the informed consent of enrollees' parents, the schools gave case managers access to enrollees' school records. Finally, some schools provided office space for QOP case managers. Thus, case managers at some sites provided services during school hours in an office on school grounds. Case managers at other sites spent time in the school during school hours but did not have an office there. At still other sites, case managers had no significant in-school presence. For after-school activities in four sites, case managers and enrollees met at the CBO's facility. At three

[8] JTPA expired in 2000, replaced by the Workforce Investment Act of 1998 (WIA).

[9] The CBO at the Houston site operated its QOP program with more limited local matching funds for the third and fourth years of the demonstration.

[10] The Washington, D.C., site had 4 case managers and served 80 enrollees.

sites, case managers met with enrollees for after-school activities in the schools themselves. Participating schools did not enter into a contractual arrangement with either the SDA or the CBO and were not reimbursed from the QOP grant.

# CHAPTER III

# IMPACT EVALUATION DESIGN AND METHODS

In principle, the goal of a program evaluation is to measure a program's effectiveness in achieving its policy objectives. In practice, effectiveness is measured as the impact of the program on outcomes that quantify the policy objectives. Accordingly, the purpose of the QOP impact evaluation is to measure the impact of QOP on outcomes such as high school graduation and engagement in postsecondary education or training. An impact is the causal effect of QOP enrollment, that is, what happens to a youth solely because he or she enrolled in QOP. In other words, it is the difference between what happens to the enrollee and what would have happened had the youth not enrolled in the program.

The obvious problem in measuring this difference was that during a youth's high school years, the youth either did or did not enroll in QOP. Therefore, we had to design a procedure that allowed us to infer, rather than directly measure, what would have happened to a QOP enrollee had he or she not enrolled in the program. The procedure used for the QOP impact evaluation was random assignment. Under random assignment, each eligible youth was assigned at random to either a QOP group or a control group. Youth in the QOP group were enrolled in QOP and allowed to participate in program activities while youth in the control group were not.

Random assignment ensured that the QOP and control groups were statistically equivalent. In practical terms, statistical equivalence means that at the time of random assignment, the only differences in measured or unmeasured characteristics between the two groups were purely random (and typically small). Therefore, subsequent differences were attributable to QOP. Comparing the average outcome for enrollees to the average outcome for the control group measured the impact of QOP on the outcome under consideration. Because the groups were statistically equivalent, the youth in the control group revealed what would have happened to enrollees had they not been enrolled in QOP.

In the remainder of this chapter, we describe in further detail the design and methods of the impact evaluation. We discuss research questions, outcomes, and data sources in the next section. In the following section, we describe how we obtained an evaluation sample and randomly assigned youth to a QOP group and a control group. In the third section, we describe how we estimated the impacts of QOP.

## RESEARCH QUESTIONS, OUTCOMES, AND DATA SOURCES

The impact evaluation of the QOP demonstration was designed to address the following research questions:

- Does QOP increase the likelihood that enrollees graduate from high school?

- Does QOP increase the likelihood that enrollees engage in postsecondary education or training?

- Does QOP increase the likelihood that enrollees engage in some gainful activity, which can include employment and attending high school as well as engaging in postsecondary education or training?

- Does QOP improve the high school performance as well as the graduation rate of enrollees?

- Does QOP decrease the likelihood that enrollees engage in risky behaviors, such as substance abuse, crime, and teenage childbearing?

- Does QOP increase the likelihood that there will be resiliency factors that might protect an enrollee from negative influences in the enrollee's social environment?

- Does the effectiveness of QOP vary across subgroups defined by enrollees' characteristics?

- Does the effectiveness of QOP vary across program sites?

The first two questions correspond to the two main objectives of the QOP demonstration. To measure engagement in postsecondary education or training, the evaluation used the same four activities that QOP used to determine whether a QOP youth qualified to receive the funds from his or her accrual account. These activities were (1) enrolling in an accredited two- or four-year college or university, (2) enrolling in an accredited vocational or technical school, (3) enrolling in a certified apprenticeship program, and (4) enlisting in the armed forces.

To answer the research questions, we developed a list of outcomes and defined several subgroups of sample members. The subgroups are described later in this chapter, and a complete list of outcomes is presented in Appendix D. The outcomes are grouped into five broad categories:

- ***High school completion.*** The outcomes in this category measure receipt of a high school diploma or receipt of a GED certificate. They also measure whether a youth was still attending high school.

- ***Postsecondary activity.*** The outcomes in this category measure engagement in postsecondary education or training and employment.

- ***High school performance.*** The outcomes in this category include achievement test scores, grade point average, credits earned, and suspensions or expulsions from high school.

- ***Risky behaviors.*** The outcomes in this category measure substance abuse, including the consumption of alcohol and illegal drugs; gang activity; criminal activity; involvement with the criminal justice system; sexual activity; and childbearing.

- ***Resiliency factors.*** The outcomes in this category measure whether there are factors in a youth's social environment that increase the likelihood that the youth will achieve the goals of QOP. The presence of a caring adult mentor is an example of a factor that might improve a youth's resiliency to negative influences.

We obtained data on these outcomes from four sources:

- ***An in-person survey.*** The survey, administered mainly during the spring of the fourth year of the demonstration, focused on risky behaviors and resiliency factors. About 59 percent of respondents completed the survey in group sessions while the rest completed the survey during a one-on-one visit by a member of the data-collection staff. The response rates were 88 percent for QOP-group youth, 80 percent for control-group youth, and 84 percent overall.

- ***Achievement tests in reading and mathematics.*** The tests were administered immediately before the in-person survey. The tests were developed from National Education Longitudinal Study (NELS) tests and scored by the Educational Testing Service (ETS). Because only a very few youth completed the in-person survey but not the achievement tests or vice versa, the response rates for the achievement tests were essentially the same as for the in-person survey.

- ***A telephone survey.*** The computer-assisted survey was administered mainly during the fall and winter of the fifth year of the demonstration and focused on high school completion status, postsecondary activity, and risky behaviors. The response rates were 87 percent for QOP-group youth, 80 percent for control-group youth, and 83 percent overall.

- ***High school transcripts.*** Data from transcripts were used to measure high school performance and graduation. From the telephone survey, we obtained a list of any high schools attended by a youth after the original QOP school. We obtained academic records for 86 percent of QOP-group youth, 77 percent of control-group youth, and 82 percent of all youth in the evaluation sample.

Appendix C describes in greater detail our data-collection procedures and provides a more in-depth analysis of response patterns.

We measured risky behaviors twice, once in the in-person survey and once in the telephone survey. Most survey respondents consider information about substance abuse, criminal activity, and sexual activity to be personal and private. Research on alternative survey modes (mail, telephone, in-person) suggests that responses to such sensitive questions are more accurate when the questions are asked in person rather than by mail or telephone (Aquilino, 1994). To minimize interaction with the data-collection staff and provide a greater sense of privacy, each youth completed the paper survey on his or her own and returned the completed questionnaire to the data-collection staff in a sealed envelope.

The purpose of covering many of the same outcomes seven to ten months later in the telephone survey was to establish a baseline for comparisons to future surveys designed to measure longer-term program impacts. The future follow-up surveys will be conducted by telephone (in fall 2002 and fall 2004). Comparing the results of those future telephone surveys to data previously collected by telephone will enable us to estimate trends unbiased by the influence of changing the mode of the survey.

## OBTAINING AN EVALUATION SAMPLE AND CONDUCTING RANDOM ASSIGNMENT

The impact evaluation sample for the QOP demonstration consists of 1,069 youth, 580 in the QOP group and 489 in the control group. In this section, we describe how we obtained the sample and split it into the QOP and control groups.

QOP CBOs and schools identified eligible youth—with the assistance of the evaluation team—during the fall of 1995 when the youth were entering ninth grade, and the CBOs provided services to randomly selected eligible youth from December 1995 through fall 2000. The District of Columbia site was the exception. Because the first CBO selected to operate QOP in that site became financially insolvent and had to be replaced, all program and data-collection activities took place one calendar year later than in the other six sites.

As presented in Chapter II, a youth was eligible for QOP if he or she was attending a QOP school, was entering ninth grade for the first time, was appropriate for QOP in accordance with applicable laws and regulations regarding disabilities, and was in the bottom two-thirds of the grade distribution based on grades from eighth grade (among students satisfying the first three criteria). The second criterion excluded students repeating the ninth grade, and the third criterion excluded students for whom QOP would have been inappropriate because of severe physical or learning disabilities. In addition to these four eligibility criteria based on a youth's characteristics, a fifth criterion was implicit: a youth had to be selected at random for QOP if the number of youth meeting the first four criteria exceeded the number of slots allocated to the school. Although this criterion clearly pertained to the demonstration program because a random assignment evaluation was to be conducted, we believe that if there were ever a regular, ongoing QOP program, it—like the demonstration program—would likely use random selection for selecting enrollees from among eligible youth if, as seems fairly probable, there were more eligibles than program slots.[11] Of course, if there were more slots than eligibles, all eligible youth would be enrolled.

In the QOP demonstration, CBO and school staff applied the first three eligibility criteria and were responsible for obtaining informed consent from a parent or guardian for a youth's enrollment in the evaluation and the program. Evaluation team staff typically applied the fourth eligibility criterion and always carried out random assignment. The rest of this section summarizes the procedures for applying the eligibility criteria, which are described in detail in Appendix A.

For the 580 available QOP slots in the 11 QOP schools, there were 2,550 "GPA eligibles"—youth meeting the four (explicit) eligibility criteria. Although an ongoing QOP program would have selected as many youth from this group as there were available slots in each school, more youth were needed in the demonstration program to form a control group for the impact evaluation. Accordingly, we randomly selected over 1,200 of the GPA-eligible youth for an initial sample. Then, for all youth in the initial sample, we instructed QOP staff to obtain consent for participation in the evaluation.

[11] This belief is based on two critical elements of the program model: (1) QOP seeks to serve youth who might not be interested in participating as well as youth who are interested in participating, and (2) the motto of the program is "Once in QOP, Always in QOP." For QOP to serve all youth meeting the four (explicit) eligibility criteria regardless of motivation means that youth cannot enter the program through a nonrandom process, for example, through applications or referrals. QOP's motto means that enrollees cannot drop out of or be expelled from the program and then be replaced by other youth.

As it turned out, about five percent of the youth in the initial sample were determined to be ineligible for QOP based, in most instances, on evidence from school records indicating that a youth had never attended the QOP school or had transferred to another school early in the school year before QOP eligibility was determined. The parents/guardians of about another seven percent of the youth in the initial sample never responded to QOP staff's attempts to obtain consent. There was strongly suggestive evidence from school staff or the youths' relatives, friends, and neighbors—but not definitive evidence from school records—that many of the youth were in fact ineligible. However, in some instances, the failure to respond probably was a passive denial of consent. Parents/guardians actively denied consent for another two percent of the initial QOP sample. Before we conducted random assignment for a school, QOP staff had to document that they had made substantial efforts to contact and obtain consent from the nonrespondents.

From among the 1,069 "consenters"—eligible youth in the initial sample for whom consent to enroll in the evaluation was obtained—we filled the available QOP slots in each school by random assignment. The 580 youth randomly selected for QOP constitute the QOP group. The 489 youth who were not selected for QOP are the control group. QOP-group members were allowed and encouraged to participate in QOP activities. Control-group members were not allowed to participate, although they could participate in the activities of other programs in their schools and communities.

## ESTIMATING PROGRAM IMPACTS

Earlier in this chapter, we described our basic approach to estimating QOP's impact on an outcome: we subtracted the mean outcome for youth in the control group from the mean outcome for youth in the QOP group. Before describing some of the technical details pertaining to how we derived this "difference-of-means" impact estimate, we discuss several issues pertaining to the interpretation of the estimate.

### Interpreting Impact Estimates

As discussed before, the control group provides the "counterfactual" to the QOP group by showing what would have happened to the QOP group had its members not been enrolled in QOP. Although members of the control group were not enrolled in QOP, they were allowed to enroll and participate in other programs offered in their schools and communities. Thus, in the evaluation of the QOP demonstration, the counterfactual is an environment in which other programs might be available and members of the control group might participate in those programs. Thus, an impact estimate measures the incremental effect of QOP relative to the effects of other programs in which youth would participate if QOP were not available. As documented in Chapter VI, 16 percent of control-group members participated in a youth program other than QOP. Given that most youth programs are substantially less intensive than QOP, participation in programs by members of the control group was probably not so extensive or intensive (for those who did participate) that the counterfactual to QOP closely resembles QOP.

Once we have obtained impact estimates, we face the question of whether we can generalize our findings beyond the seven CBOs in the QOP demonstration, that is, are the findings "externally valid." The answer is no. The CBOs in the demonstration were not selected by using any type of probability sampling. Thus, they are not statistically representative of a universe of potential CBOs. The procedures that were used to select CBOs are described in Maxfield et al. (2003).

We have not raised the issue of external validity to criticize the procedures for selecting CBOs or the design of the demonstration. Rather, we have sought to clarify which interpretations of the evaluation findings are valid and which are not. We are not aware of any demonstration of a social program in which sites have been selected so as to ensure external validity of evaluation findings.

Finally, it is important to remember that random assignment was conducted successfully and that its integrity was maintained in the sense that, based on our knowledge from several monitoring activities, no control-group youth participated in QOP. Thus, for the fixed set of CBOs in the QOP demonstration, the impact estimates measure the causal effects of QOP, that is, they are "internally valid."

## Estimating Impacts

In subsequent chapters, we present impact estimates for the whole QOP demonstration, that is, for the seven sites combined. We also present impact estimates for each of the seven sites considered separately. All of these estimates were obtained from school-level estimates. We took this approach so that we could measure accurately the statistical uncertainty in our impact estimates for sites.

To obtain an impact estimate for a school, we subtracted the mean outcome among youth in the control group for that school from the mean outcome among QOP enrollees for that school. Random assignment in each school was conducted separately—that is, independently—from the random assignments in other schools. Although at least some of the youth in both groups no longer attended the original QOP school by the end of the demonstration, all youth remained members of the QOP group or control group to which they were originally assigned.

For each of the four sites in which youth were selected from only one school, the site-level impact equals the school-level impact. For the other three sites, the site-level impact equals a weighted average of the school-level impacts, where the weight placed on the impact estimate for a given school equals the proportionate number of QOP slots assigned to that school. For the District of Columbia site, the impact estimates from the two QOP schools were weighted equally—with weights of 0.5 and 0.5—because the schools had equal numbers of slots. This was also true for the Houston site. For the Memphis site, the impact estimates for the three QOP schools had weights of 0.27, 0.35, and 0.38, reflecting the slightly unequal allocation of QOP slots.

To obtain an impact estimate for the entire demonstration, we calculated a weighted average of the site-level impact estimates. However, our approach to weighting site-level estimates to obtain a demonstration-level estimate was different from our approach to weighting school-level estimates to obtain a site-level estimate. We weighted site-level estimates equally rather than according to the number of QOP slots available in each site. Our equal weighting of sites was based on the belief that if QOP were implemented as an ongoing, national program, CBOs would have roughly equal numbers of QOP slots. We believe that the variation in the demonstration site program sizes would not be replicated in an on-going QOP program, as discussed in Appendix E. To determine whether our conclusions would be different if site-level impacts were weighted unequally rather than equally, we derived impact estimates for the whole QOP demonstration by weighting each site's impact estimate according to the proportionate number of slots at that site. Appendix F presents the estimates. Appendix E presents the mathematical expressions for how we derived all of our impact estimates.

Because the QOP and control groups for each school were the product of random assignment, the difference-of-means impact estimator is statistically unbiased. This means that if it were possible to repeat the random assignment process many times for each school, the average impact estimate would

equal the true impact of QOP in that school. The reason is that the only differences between the QOP and control groups at the time of random assignment are purely random, and those differences (and their effects on impact estimates) will "average out" if random assignment were performed many times. Thus, "high" and "low" impact estimates will average to the true impact.

Of course, it is not possible to perform random assignment many times. Instead, it is performed just once for each school. Although random assignment ensures that any differences in average baseline characteristics between QOP enrollees and control-group youth are purely random, random assignment cannot ensure that the QOP and control groups are perfectly balanced across all baseline characteristics. For example, there is no guarantee that 100 females will be split 50/50 between the two groups. There is even some chance that they will be split very unevenly. Then, if the true impacts are different for females and males, we could obtain an estimate of the overall impact that is "too high" or "too low," even though our estimator is unbiased.

To attempt to correct for purely random baseline differences between the QOP and control groups, we have derived "regression-adjusted" impact estimates. These estimates are presented in Appendix F, where we also examine the baseline differences between the QOP and control groups for which our regression adjustments sought to compensate. Because DOL elected not to have a baseline survey conducted for the QOP demonstration, we have data for only a small set of baseline characteristics: age, sex, race/ethnicity, and grade point average from the eighth grade. As described in Appendix B, our data on these characteristics were obtained when we determined eligibility for random assignment and when we conducted the telephone survey.

Because random assignment occurred after eligibility for QOP was determined but before youth started participating in QOP, enrollees consisted of those who participated in QOP activities (about 88 percent) and those who did not, the so-called "no-shows" (about 12 percent). The impact estimates are based on all enrollees—the QOP target population—rather than on only those youth sufficiently motivated to participate in the program's activities. For two reasons, it is appropriate to evaluate QOP according to its impacts on enrollees rather than its impacts on participants.

First, the QOP motto—"Once in QOP, Always in QOP"—reflects one of the most fundamental philosophical underpinnings of the program model, namely, that the least motivated youth might have the greatest need for assistance and that the program is designed to serve and will make every reasonable effort to serve those youth. That no-shows remain members of the QOP group and should continue to receive substantial attention from QOP staff is a requirement of the QOP model.

Second, estimating impacts for enrollees is faithful to the experimental design and does not require that we assume that QOP had no impact on no-shows. Avoiding such an assumption is, we believe, prudent because QOP staff often invested substantial time in trying to engage no-shows. Such efforts might have had nontrivial, albeit maybe still small, effects even if the efforts did not result in active participation in QOP.

Although we believe that the arguments are strong for presenting impact estimates for enrollees only, Appendix G presents impact estimates for participants. To derive such estimates, we assumed that QOP had no impact on no-shows. Then, the impact for participants was obtained by dividing the impact for enrollees by the participation rate among enrollees (Bloom, 1984).

## Weighting to Adjust for Nonresponse

As noted before, about 16 percent of youth in the evaluation sample did not complete the in-person survey or take the achievement tests. About 17 percent did not complete the telephone survey, and no transcript data at all were obtained for 18 percent of youth. When we calculated the mean outcome among QOP enrollees for an outcome measured in the telephone survey, for example, we had data only for the enrollees who responded to the survey. Therefore, although we wanted to obtain the mean for all QOP enrollees—respondents and nonrespondents—the mean that we were able to calculate was based on the respondents only. As reported in Appendix E, differences existed in the baseline characteristics of respondents and nonrespondents. Thus, outcomes might also have differed as well, although we could not measure those differences. To compensate for those differences and obtain mean estimates from respondents that were as close as possible to the means for all youth—both respondents and nonrespondents—we assigned weights to the respondents (the weights for nonrespondents equal zero).

As described in Appendix E, sample members' weights were based on their estimated response probabilities. Respondents who had lower response probabilities and "looked more like" nonrespondents in terms of their baseline characteristics received greater weights than respondents who had higher response probabilities and "looked less like" nonrespondents. The objective was to make the weighted sample of respondents closely resemble the sample of all youth. We used the assigned weights to calculate mean outcomes. Because the mechanisms and patterns of nonresponse differed across data-collection activities, we developed three sets of weights. The three sets adjusted for nonresponse to, respectively, the (1) in-person survey and achievement tests, (2) the telephone survey, and (3) high school transcripts.

## Estimating the Precision of Impact Estimates

In addition to estimating impacts, we estimated standard errors to measure the potential error in the impact estimates. Such error is largely attributable to the relatively small number of youth from each school. Appendix E presents the mathematical expressions that show how we estimated standard errors.

We used the standard error for an impact to conduct a t-test to determine whether the estimated impact was large relative to the error in that estimate. Because we conducted two-sided t-tests, either a positive impact or a negative impact could be judged large if it was sufficiently far from zero. In fact, in subsequent chapters, we report whether each estimated impact is "significantly different from zero" at each of three conventional significance levels—1 percent, 5 percent, and 10 percent. An impact that is significantly different from zero at a given significance level—1 percent, for example—is also significantly different at any higher level—5 and 10 percent. When an impact is significantly different from zero at the 1 percent level, we are $100 - 1 = 99$ percent "confident" that the impact is significantly different from zero. Thus, although the true impact might be smaller (or bigger) than we have estimated, we are fairly certain that it does not equal zero, even allowing for the potential error in our estimate.

A word of caution about the interpretation of results from statistical tests is that "statistical significance" does not imply "policy importance." An impact that is significantly different from zero might still be small. Conversely, because the evaluation sample from the QOP demonstration has fairly small numbers of youth from each school, an estimated impact might be large from a policy perspective but based on insufficient data for us to conclude that it is significantly different from zero. A related consideration in that case is that while there is a chance—an unacceptable chance by conventional

standards—that the true impact is close to zero, leading us to conclude that the impact is not significant, there is also a chance that the true impact might be much greater than we have estimated. Finally, we note that when we derive many impact estimates and conduct many significance tests, some impacts will turn out to be significant just by chance, even though the true impact is close to zero. To address this issue, we look in subsequent chapters for consistent patterns of impacts across, for example, related outcomes. We have also assessed the sensitivity of our results to alternative estimation procedures. Appendix F presents results from our sensitivity analyses.

## Estimating Impacts for Subgroups

Impact estimates for the full evaluation sample might conceal important differences in impacts across subgroups of youth. If impacts do exist overall, they might be heavily concentrated in or could be much larger for some subgroups. Conversely, if impacts do not exist overall, they might still exist for some subgroups. Thus, estimates of subgroup impacts can help policymakers identify the youth for whom a program is most effective and thereby better target a program or better tailor its services.

In Chapter VII, we present impact estimates for subgroups defined by two classification schemes. The first scheme classified youth according to baseline characteristics, and the second scheme classified youth according to location. Applying the first scheme, we derived impact estimates for the following subgroups:

- Males and females
- Youth who entered the ninth grade when they were over the age of 14 and youth who entered ninth grade when they were 14 or younger
- Youth in the lower third of the eighth-grade GPA distribution for the evaluation sample, youth in the middle third, and youth in the top third

Applying the second subgroup classification scheme, we derived impact estimates for the following subgroups:

- Enrollees from Cleveland, enrollees from the District of Columbia, enrollees from Fort Worth, enrollees from Houston, enrollees from Memphis, enrollees from Philadelphia, and enrollees from Yakima
- Enrollees from the sites funded by the Department of Labor and enrollees from the sites funded by The Ford Foundation

Because all of the subgroups were defined by characteristics that were fixed at baseline, we derived impacts and performed statistical tests by using the same methods that we used for the entire evaluation sample. Random assignment ensures that any differences in baseline characteristics between QOP enrollees and control-group youth for the whole sample and by subgroup were due entirely to chance.

If we were to define a subgroup by a characteristic that was not fixed at baseline, the enrollees and the control-group members in that subgroup might have differed systematically at baseline. Then, any subsequent differences in outcomes might have been attributable to those baseline differences rather than to QOP. For this reason, we did not estimate impacts for outcomes that were conditional on other outcomes and, thus, may have been influenced by QOP.

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# CHAPTER IV

# PARTICIPATION IN QOP

Enrollees spent an average of 174 hours per year on QOP activities, 23 percent of the annual goal of 750 hours.

Enrollees spent an average of 72 hours per year on education (29 percent of the 250 hour goal), 76 hours on developmental activities (30 percent of the 250 hour goal), and 26 hours on community service (11 percent of the 250 hour goal).

The average time spent on QOP activities fell steadily from 247 hours in the first year of the demonstration to 89 hours in the fourth year.

Enrollees who attended many QOP activities tended to have higher grades at baseline, be age 14 or younger upon entering the ninth grade, be in families receiving welfare, and be in families headed by a single parent. On the other hand, enrollees who attended few QOP activities tended to have a lower baseline GPA, be male, speak a language other than English at home, and be over 14 years of age upon entering the ninth grade.

Enrollees who attended few QOP activities reported being uninterested in those activities, having other after-school activities, such as playing a sport, working, or caring for other family members.

QOP sought to foster active participation by all eligible youth, not just those who were strongly motivated to participate. To assess whether QOP was successful, we analyzed enrollee participation to determine, for example, whether most enrollees engaged in most activities or whether many enrollees participated only occasionally.

Our analysis of participation was based on data on the hours that each enrollee spent engaged in each of the three types of program activities—educational, developmental, and community service—as determined from the management information system (MIS) used by each CBO to monitor and manage program operations. Case managers and site coordinators recorded MIS data for the purpose of computing periodic stipend payments and accrual account contributions for each enrollee. Hours were entered into the MIS for each type of activity each month for each enrollee.

MIS data have four limitations stemming from the fact that the data were recorded for administrative, rather than research, purposes:

- Given that mentoring time did not count toward stipends or accrual account contributions, data on time spent being mentored were not recorded.

- In some sites, when an enrollee achieved a significant milestone, such as earning a B average or higher on his or her report card, the CBO would record extra hours (50 extra hours, for example) in the MIS for the enrollee. The extra hours resulted in an increased stipend payment and accrual account contribution. Unfortunately, bonus hours could not be distinguished from regular hours in the MIS data and thus result in overestimates of the amount of time spent on program activities for some enrollees.

- Some sites were unable to provide MIS data for the final months of the demonstration. Results for the fifth and final year represent two sites (Cleveland and Fort Worth), results for the fourth period represent six sites (Cleveland; Fort Worth; Houston; Philadelphia; Washington, D.C.; and Yakima), whereas results for other time periods represent all seven sites. (Periods are defined below.)

- The MIS data contain outliers. According to the MIS data, a few enrollees spent more than 2,000 hours in a year on QOP, which, if true, would indicate that these enrollees spent 40-hour weeks on program activities all year long. Because such extensive participation is implausible, we truncated recorded values at 36 hours per component per month, which seemed like a reasonable upper bound on participation.

Since QOP delivered services for five years, we might expect that the amount of time that enrollees spent on program activities changed over the course of the demonstration. Enrollees entered the program near the beginning of their adolescence and could remain active until early adulthood. To observe the changing participation patterns as enrollees aged, we divided the five-year demonstration period into five annual time periods (with one exception):[12]

- Period 1—The first full year of program operations (February 1996 through January 1997)

- Period 2—The second full year of program operations (February 1997 through January 1998)

- Period 3—The third full year of program operations (February 1998 through January 1999)

- Period 4—A seven-month period from the end of Period 3 to the beginning of the fifth academic year (February 1999 through August 1999)

- Period 5—The final full year of program operations (September 1999 through August 2000)

[12] All periods are defined one year later for the Washington, D.C., site.

During Periods 1 through 4, the large majority of enrollees were attending high school. Those who were not attending high school had officially or informally dropped out, and some were attending GED preparation classes. In Period 5, the majority of enrollees were engaged in one or more of a broad array of postsecondary activities, including college, employment, apprenticeship, trade school, and service in the armed forces. QOP services for such enrollees were limited to mentoring. In contrast, QOP offered the full range of services to the enrollees who were still in high school during Period 5.

## PARTICIPATION IN QOP

Figures IV.1 through IV.4 are based on MIS data and display the frequency distributions of hours spent on program activities per period. In each figure, there is a vertical bar for each of the five time periods, and each bar shows the distribution of all QOP enrollees across categories of hours. A segment on a bar shows the percentage of enrollees whose participation was in a particular category (for example, 101 to 200 hours). Across all of the segments in a bar, the percentages add to 100.[13] Figure IV.1 shows time spent on all recorded program activities combined—educational, developmental, and community service—where the program goal was 750 hours per year. Figures IV.2 through IV.4 show time spent on each of these three component activities, where the annual goal was 250 hours for each component.

The large majority of enrollees spent a small fraction of the target number of hours on program activities. On average, enrollees spent 174 hours on QOP activities per year, 23 percent of the goal. Enrollees spent an average of 72 hours per year on education, 76 hours on developmental activities, and 26 hours on community service. Thus, enrollees spent roughly equal amounts of time on educational and developmental activities. In contrast, they spent substantially less time on community service. By Period 4, community service ceased to be an active program component for all but a small group of dedicated enrollees.

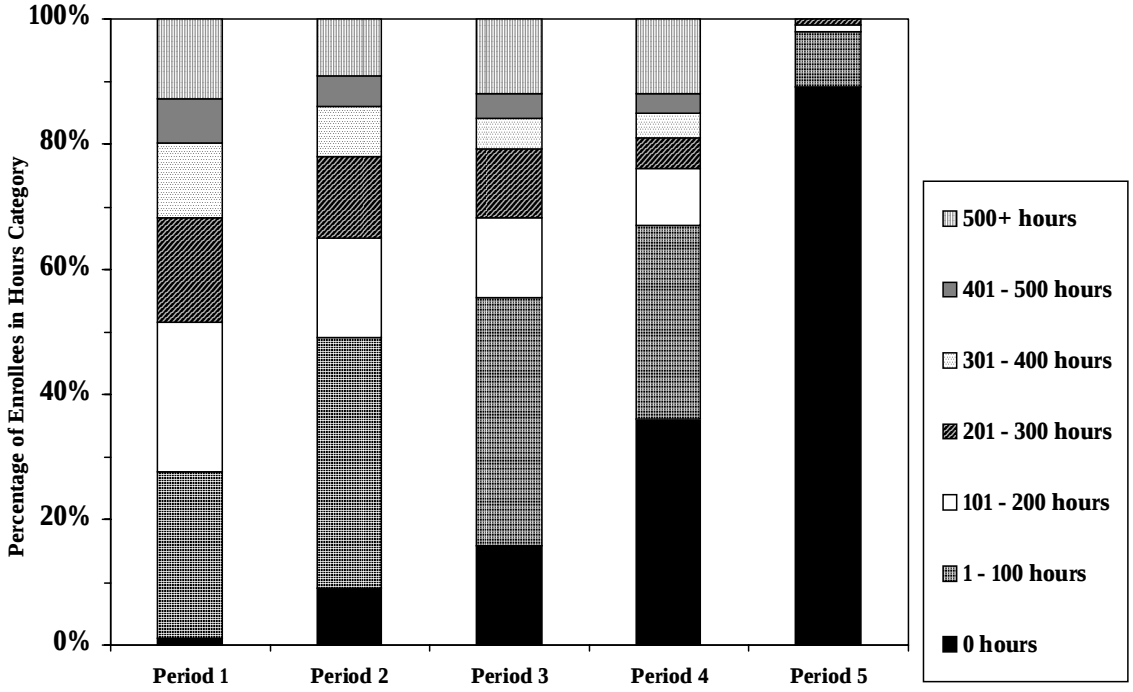
Throughout the demonstration, the mean amount of time spent on QOP activities fell steadily. The average enrollee spent 247 hours on QOP in Period 1 and 89 hours in Period 4.[14] The percentage of enrollees spending no time at all on QOP activities increased steadily from 1 percent in Period 1 to 36 percent in Period 4. The proportion of enrollees in the middle range of the distribution (201 to 300 hours per year) declined steadily from 17 percent in Period 1 to 5 percent in the Period 4.

[13] Since Period 4 was only seven months long, the hours for Period 4 in Figures IV.1-IV.4 are inflated by a factor of 12/7 to be comparable to the hours of the other periods.

[14] Because QOP services in Period 5 differed substantially from those of the first four periods, we report trends over the first four periods. In Period 5, QOP offered enrollees who had graduated from high school only mentoring services, and hours spent being mentored were not recorded.

FIGURE IV.1

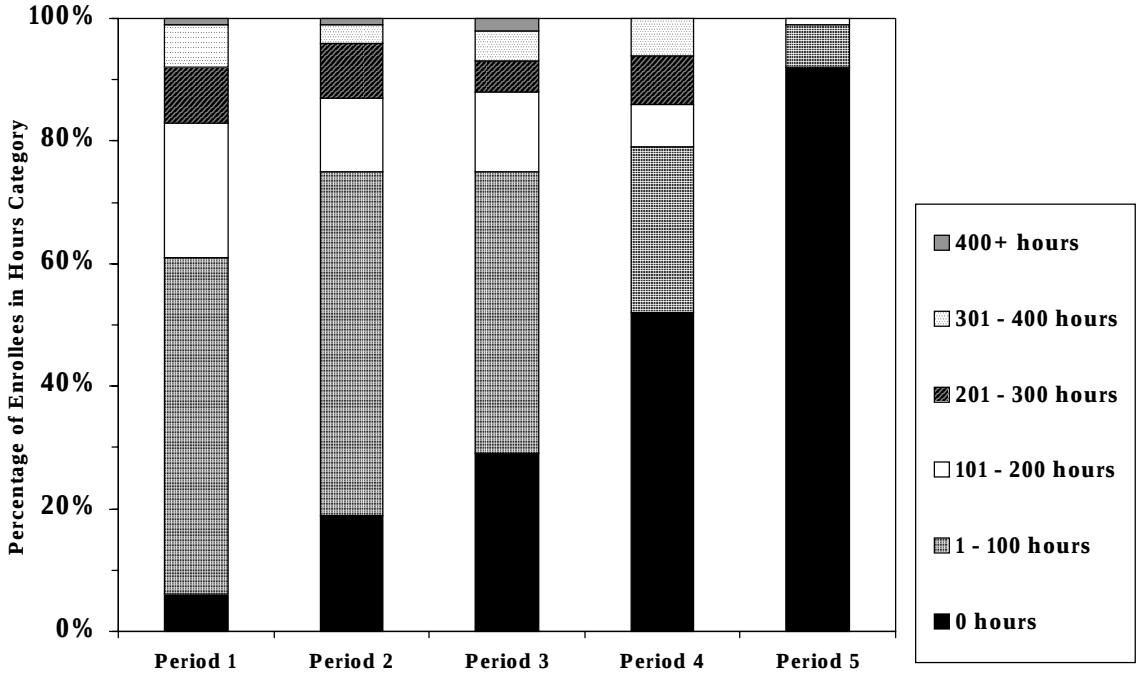
DISTRIBUTION OF HOURS BY PERIOD




SOURCE: MIS data.

FIGURE IV.2

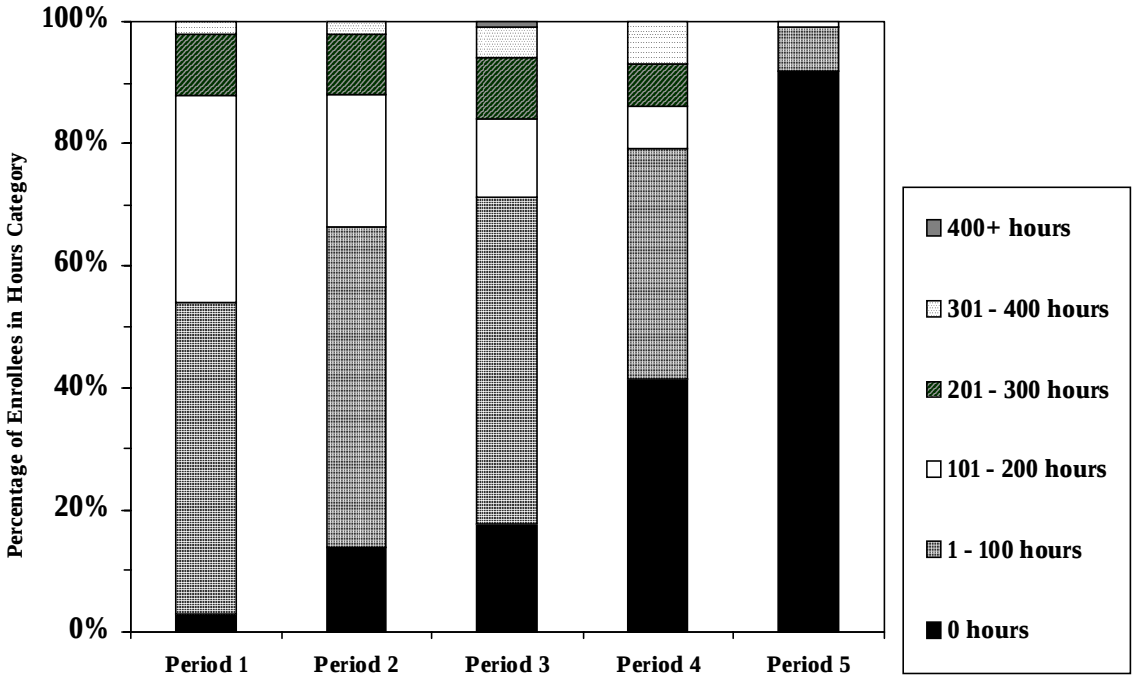
DISTRIBUTION OF EDUCATION HOURS BY PERIOD




SOURCE: MIS data.

FIGURE IV.3

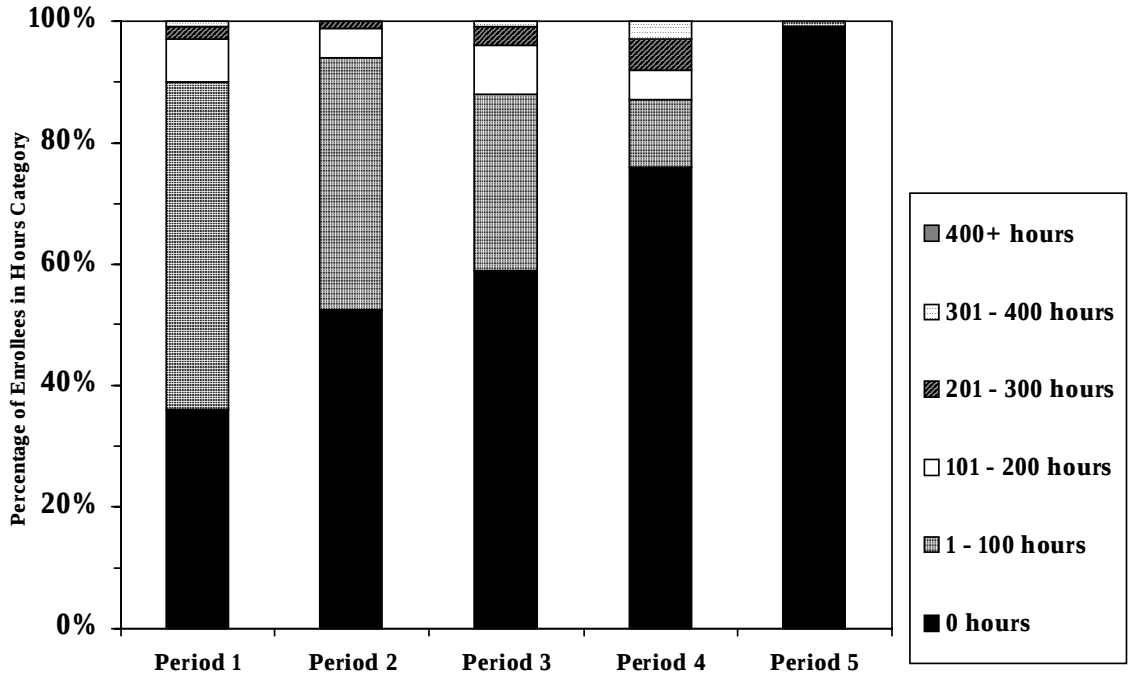
DISTRIBUTION OF DEVELOPMENT HOURS BY PERIOD




SOURCE: MIS data.

FIGURE IV.4

DISTRIBUTION OF COMMUNITY SERVICE HOURS BY PERIOD




SOURCE: MIS data.

## PROFILES OF DEDICATED ENROLLEES AND DISENCHANTED ENROLLEES

In this section, we profile the "dedicated" enrollees who attended many QOP activities, and the "disenchanted" enrollees who attended few QOP activities. Dedicated enrollees spent 1,300 or more hours on QOP during the demonstration, and disenchanted enrollees spent 100 or fewer hours on QOP. According to the first row in Table IV.1, 19 percent of all QOP enrollees were dedicated, and 12 percent were disenchanted. The second row in Table IV.1 shows that 17 percent of male enrollees were dedicated, while 15 percent were disenchanted—a figure that is significantly differently from the 12 percent figure for all enrollees.

We find that QOP enrollees were more likely to be dedicated and spend large amounts of time on program activities if they:

- Had a GPA in the top third of the baseline grade distribution. This finding suggests that more successful youth spent more time on program activities.

- Were age 14 or younger when they entered the ninth grade. This finding may have two explanations. First, youth who were younger when they entered the ninth grade were less likely to have previously repeated a grade and thus may have been relatively successful students. Second, youth in their early adolescence may have been more receptive to QOP than were older youth.

- Were members of families who received cash welfare or food stamps.[15] Eligibility for QOP was not restricted to youth from low-income families, although the large majority of QOP enrollees lived in low-income neighborhoods.

- Were members of families with a single biological or step-parent.[16]

The profile of the disenchanted group indicates that enrollees were more likely to spend very little time on QOP activities if they:

- Had a GPA in the bottom third of the baseline grade distribution.

- Were male.

- Did not usually speak English at home.

- Were over 14 years of age upon entering the ninth grade.

- Were not members of families who received cash welfare or food stamps.

[15] Receipt of welfare and food stamps was measured only near the end of the demonstration period. While there is a possibility that receipt of assistance was influenced by participation in QOP, we believe that the risk of bias resulting from this is small for the following reason. Receipt of assistance was determined largely by the youth's parents, and we expect that the potential indirect effect of QOP on the youth's parents was small.

[16] Family composition was measured only near the end of the demonstration period. However, it seems unlikely that QOP would have a strong influence on family composition.

TABLE IV.1

PROFILES OF ENROLLEES ATTENDING MANY QOP ACTIVITIES AND ENROLLEES ATTENDING FEW QOP ACTIVITIES

| Characteristic | Percentage of enrollees with the indicated characteristic who were | |
|---|---|---|
| | Dedicated | Disenchanted |
| All enrollees | 19 | 12 |
| Male | 17 | 15††† |
| Female | 20 | 9 |
| GPA in top third of baseline distribution | 28††† | 6††† |
| GPA in middle third of baseline distribution | 18 | 12 |
| GPA in bottom third of baseline distribution | 13††† | 18††† |
| Does not usually speak English at home | 18 | 25††† |
| Usually speaks English at home | 19 | 8 |
| 14 or younger when entering ninth grade | 22††† | 7††† |
| Older than 14 when entering ninth grade | 13 | 22 |
| Someone in the household receives cash welfare or food stamps | 31††† | 5† |
| No one in the household receives cash welfare or food stamps | 17 | 10 |
| No adult in household | 7††† | 10 |
| One or more adults, not biological or step-parent | 14 | 8 |
| Only one biological or step-parent | 25†† | 6† |
| More than one biological or step-parent | 22 | 11 |

SOURCE: MIS data and telephone survey.

† Significantly different from the percentage for all other enrollees at the 90% confidence level, two-tailed test
†† Significantly different from the percentage for all other enrollees at the 95% confidence level, two-tailed test
††† Significantly different from the percentage for all other enrollees at the 99% confidence level, two-tailed test

## REASONS FOR LOW PARTICIPATION

For the in-person survey during the fourth year of the demonstration, we asked enrollees whether they felt that the time they spent on QOP was limited, and if so, what factors limited their participation. We also asked what aspects of the program they found most and least helpful. The results, presented in Figure IV.5, show that:

- Twenty-four percent reported that their lack of interest in QOP activities was the reason for not participating more.

- Fifteen percent reported that their time commitment to a job was the reason for not participating more.

For the 151 enrollees who participated early in the demonstration and then stopped participating before the end of the fourth academic year of the demonstration, Figure IV.6 presents the reasons for stopping participation. It shows that:

- Nearly 3 in 10 stopped participating because they left high school as a result of either graduating early or dropping out.

- About 1 in 5 stopped because of a job.

- About 1 in 6 stopped because of a move out of the area or a transfer to another school.

Half of those enrollees who reported that they participated in some QOP activity at some time during the demonstration (88 percent of all QOP enrollees) felt that the amount of time they spent on QOP activities was limited by some factor. Among that half, Figure IV.7 shows that:

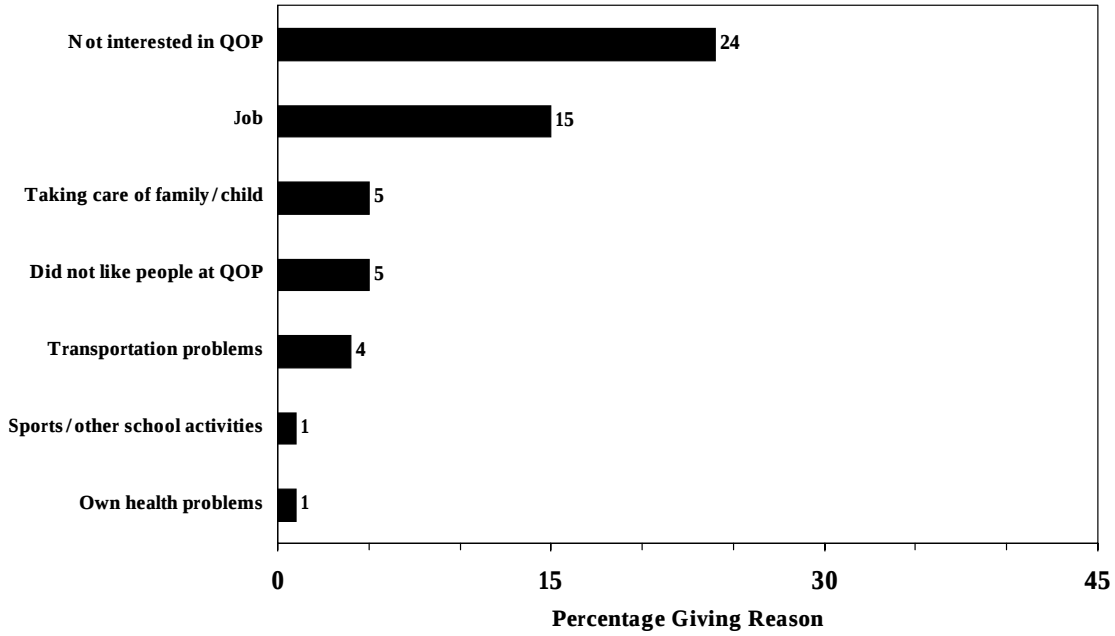
- The participation of nearly 2 in 5 was limited by a job. This is consistent with the fact that most enrollees were 17 or 18 years old at the time of the interview.

- The participation of 1 in 5 was limited by responsibilites for caring for own children or other family members.

- The participation of over 1 in 8 was limited by after-school activities, such as sports.

FIGURE IV.5

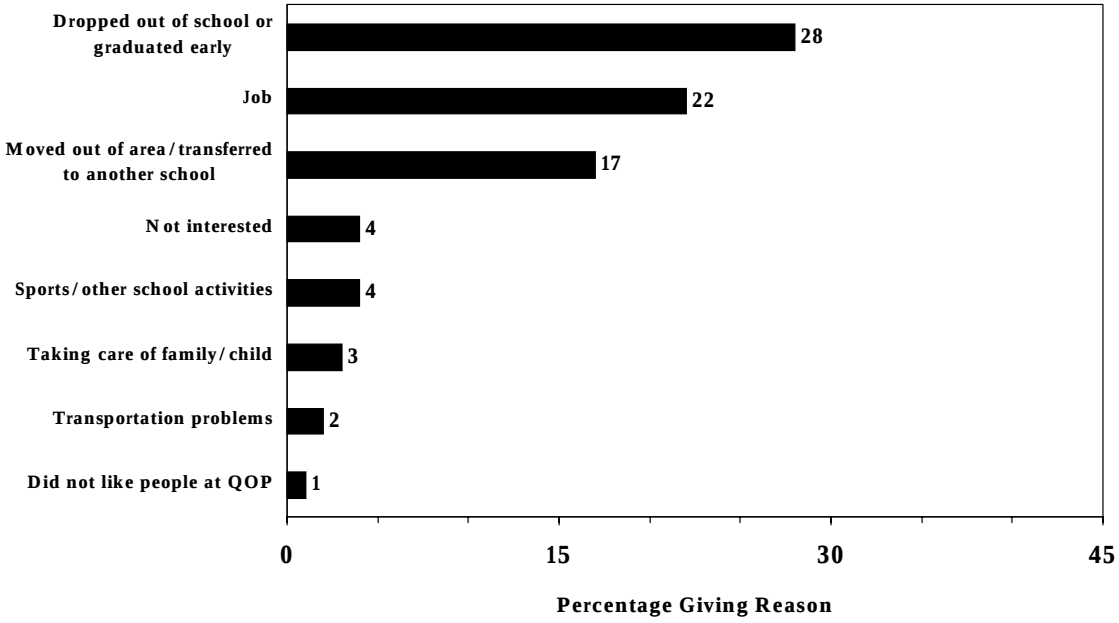
REASONS FOR LIMITED PARTICIPATION BY DISENCHANTED ENROLLEES




SOURCE: Telephone survey.

FIGURE IV.6

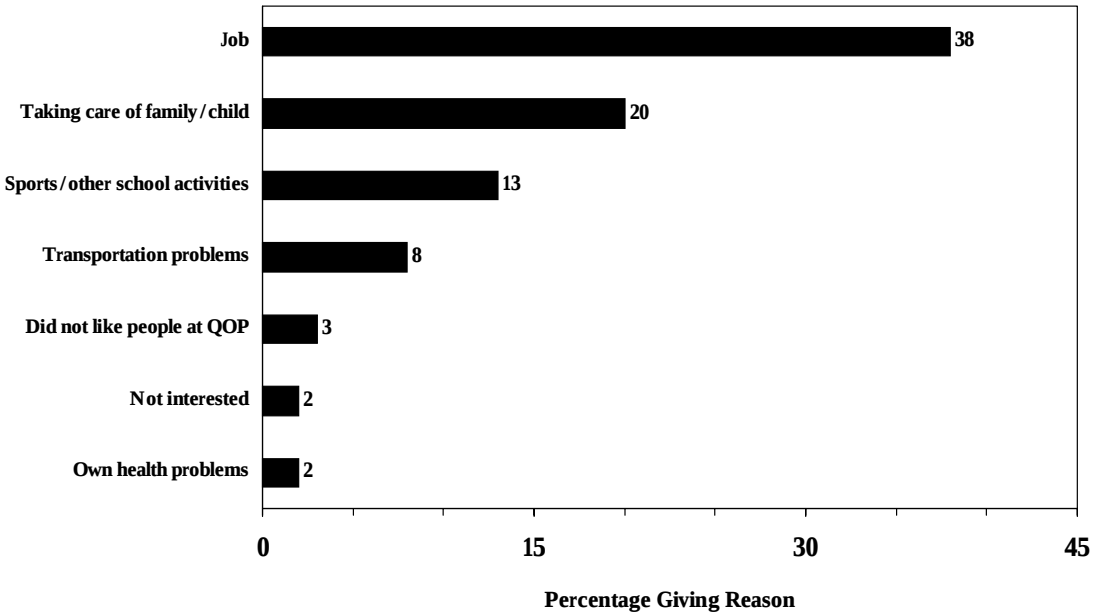
REASONS FOR STOPPING PARTICIPATION




SOURCE: Telephone survey.

FIGURE IV.7

REASONS FOR LIMITED PARTICIPATION BY ALL ENROLLEES WHO LIMITED THEIR PARTICIPATION




SOURCE: Telephone survey.

# CHAPTER V

# SHORT-TERM IMPACTS ON HIGH SCHOOL COMPLETION, HIGH SCHOOL PERFORMANCE, AND POSTSECONDARY ACTIVITIES

**QOP significantly increased by seven percentage points the likelihood that enrollees graduated from high school with a diploma.**

**QOP increased the likelihood of engaging in postsecondary education or training, although the size and significance of the impact depends on how this outcome was measured and how the impact was estimated.**

- QOP significantly increased by six percentage points the likelihood of engaging in postsecondary education or training when education or training was defined to include college attendance, vocational or technical school attendance, apprenticeship enrollment, and armed forces enlistment. The impact became smaller and insignificant when this measure was either narrowed to include only college attendance or broadened to include employment. It also became smaller and insignificant when we used alternative approaches to estimating the impact.

- When we included acceptance into college—in addition to current attendance at college—in the definition of postsecondary education or training, QOP significantly increased the likelihood of engaging in postsecondary education or training by six to nine percentage points for all but one measure of postsecondary activity.

**QOP did not significantly improve enrollee performance while in high school.**

- QOP did not significantly raise reading or mathematics achievement test scores or high school grades.

- QOP did not significantly increase the number of credits earned by enrollees or reduce disciplinary actions taken against enrollees in high school.

## HIGH SCHOOL COMPLETION AND PERFORMANCE

The first of the two main goals of QOP was to increase the likelihood that enrollees graduated from high school. QOP raised the graduation rate—the percentage of enrollees receiving a diploma—by seven percentage points. This impact was statistically significant. Table V.1 presents the impact

estimates. (All tables appear at the end of the chapter.) The left-hand column lists several outcomes pertaining to high school completion. For a given outcome, the next three columns show, respectively, the mean outcome for QOP enrollees, the mean outcome for control-group youth, and the impact. The impact is the mean outcome for the QOP group minus the mean outcome for the control group. The first row of Table V.1 reveals that 46 percent of QOP enrollees received diplomas and that 40 percent of control-group youth received diplomas; the impact is an increase of 7 percentage points (when calculated from unrounded means for the QOP and control groups). In all of the tables in this report, any impact that is significantly different from zero at the 90, 95, and 99 percent confidence levels is marked with one, two, and three asterisks, respectively.

In view of the fact that our data were collected before the end of the demonstration when about 16 percent of sample members were still attending high school, we used four measures of high school completion. The measures begin with the narrowest—graduating from high school with a diploma (the top row of the table)—and end with the broadest—graduating from high school with a diploma, earning a GED certificate, attending high school, or attending a GED class (the bottom row of the table).

Table V.1 shows that QOP had significant positive impacts on both the narrowest and the broadest measures of high school completion, but insignificant impacts on the two intermediate measures. This pattern indicates that QOP improved the likelihood that enrollees earned a diploma and suggests that QOP increased the likelihood that enrollees who dropped out of high school attended a GED class. It also suggests that QOP did not improve either the likelihood that enrollees earned a GED during the period covered by the survey or the likelihood that enrollees who did not graduate on time stayed in high school for a fifth year. This pattern of short-term impacts also indicates that the final size of QOP's impact on high school completion will depend on whether the sample members still attending high school when we conducted our survey eventually earn diplomas or GED certificates and whether those attending GED classes eventually earn GED certificates. This will be measured in the next survey of sample members.

Beyond the significant impacts on high school graduation and completion that we have already discussed, we find in Table V.2 that QOP did not significantly improve achievement test scores, grades, or credits earned, and it did not significantly reduce disciplinary actions. Although QOP might not have raised grades if QOP enrollees were taking more challenging courses than the youth in the control group, we would have expected QOP to increase standardized test scores if it had an impact on achievement.

## POSTSECONDARY ACTIVITIES

The second of the two primary goals of QOP was to increase the likelihood that enrollees engaged in postsecondary education or training by attending a college or a vocational or technical school, enrolling in an apprenticeship program, or enlisting in the armed forces. According to data from our telephone survey, QOP significantly increased the percentage of youth undertaking such postsecondary education or training by 6 percentage points, from 26 to 32 percent. These estimated means appear in the first two columns of figures in Table V.3, and the estimated impact is in the first column of figures in Table V.4.

When we consider narrower definitions of postsecondary education or training that count only college attendance or broader definitions of postsecondary activity that count not only education or

training but also employment, the estimated impacts in the first column of figures in Table V.4 are smaller and not significant. However, they are consistently positive. A comparison of the impact on college attendance with the impact on all four postsecondary education or training activities indicates that about half of the impact on the latter was attributable to increased college attendance while the other half was attributable to increased vocational and technical school attendance, apprenticeship training, and armed forces enlistment.

It is clear from Table V.4 that the size and significance of QOP's impact on postsecondary education or training depended on how we measured such activity. The size and significance of the impact also depended on how we estimated it. As reported in Appendix F, we found that the impact on the likelihood of engaging in postsecondary education or training was smaller and insignificant when we used an alternative approach to weighting site-level impacts and when we used regression methods to adjust for random differences between the baseline characteristics of the QOP group and the control group.

Recognizing that some youth might have needed more than the six or fewer months between high school completion and our telephone survey to begin postsecondary education or training, we defined outcomes that count acceptance by a college as well as attending a college as forms of postsecondary education or training. The impacts of QOP on these outcomes—in the second column of figures in Table V.4—were positive and significant with only one exception (attending or acceptance by a four-year college). QOP increased by eight points the percentage of enrollees who had been accepted by a college, were attending a college, or were engaged in one of the other three types of postsecondary education or training (vocational/technical school, apprenticeship, and armed forces).

Comparing estimates in the first two rows of Table V.4 reveals that the higher impact estimates obtained when we count acceptance by a college in addition to attendance are attributable to the higher acceptance rates for QOP enrollees than for control-group youth by two-year colleges. In fact, the impact on four-year college training is the same when acceptances are counted as when they are not. Table V.4 also shows that the impacts estimated when we count college applications as well as acceptances and attendance were roughly the same as the impacts estimated when we count only acceptances and attendance.

The broadest measures of activity in Tables V.3 and V.4 include preparation for postsecondary education or training, namely, attending high school or a GED class. The generally smaller impacts for these outcomes suggest that the control-group youth might at least partially "catch up" to the QOP enrollees in obtaining postsecondary education or training if those control-group members who were attending high school or a GED class at the time of our telephone survey successfully complete high school. The additional follow-up data collected in the next two surveys will allow us to determine how many youth completed high school from among the many youth—both QOP enrollees and control-group youth—who were attending high school or a GED class when the first telephone survey was conducted. The new data will also reveal whether the youth who had been accepted by colleges subsequently enrolled. If they did, the longer-term impacts on postsecondary education or training might be fairly close to the short-term impacts that count both college attendance and acceptance. If not, the longer-term impacts might be close to the short-term impacts that count only college attendance. Of course, neither of these two sets of short-term impacts might accurately reflect longer-term impacts if, for example, the patterns of postsecondary education or training for youth completing high school in five years are substantially different from the patterns for youth completing high school in four years.

TABLE V.1

SHORT-TERM IMPACTS ON HIGH SCHOOL COMPLETION

| Outcome | QOP-Group Mean (percentage) | Control-Group Mean (percentage) | Impact (percentage points) |
|---|---|---|---|
| Earned diploma | 46 | 40 | 7* |
| Earned diploma or GED certificate | 54 | 49 | 5 |
| Earned diploma or GED certificate or attending high school | 68 | 66 | 3 |
| Earned diploma or GED certificate or attending high school or a GED class | 79 | 72 | 7** |

SOURCE: Telephone survey and transcripts.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed. The evaluation sample had 580 QOP enrollees and 489 controls.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE V.2

SHORT-TERM IMPACTS ON HIGH SCHOOL PERFORMANCE

| Outcome[a] | QOP-Group Mean | Control-Group Mean | Impact |
|---|---|---|---|
| Mathematics achievement test score (percentile) | 40.9 | 40.5 | 0.4 |
| Reading achievement test score (percentile) | 43.2 | 42.7 | 0.5 |
| Cumulative GPA (four-point scale) | 2.13 | 2.19 | -0.06 |
| Mathematics/science GPA (four-point scale) | 1.81 | 1.85 | -0.03 |
| Total credits (Carnegie units) | 16.2 | 15.8 | 0.5 |
| Core academic credits (Carnegie units) | 10.7 | 10.2 | 0.6 |
| Mathematics/science/English credits (Carnegie units) | 7.2 | 6.9 | 0.3 |
| Ever suspended | 44% | 45% | -1 |
| Ever expelled | 8% | 7% | 0 |
| Suspended or expelled in past 12 months | 34% | 38% | -4 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. Credits are expressed in Carnegie units that standardize for in-class time. One Carnegie unit corresponds to a class that meets for 45 to 60 minutes every day of the week for an entire academic year. Core academic credits are the credits earned in mathematics, science, English, social studies, and foreign language classes.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE V.3

GROUP MEANS FOR POSTSECONDARY ACTIVITIES
(Percentages)

| Outcome [a] | Alternative Definitions of College Training | | | | | |
|---|---|---|---|---|---|---|
| | Attending | | Attending or Accepted | | Attending, Accepted, or Applied | |
| | QOP Group | Control Group | QOP Group | Control Group | QOP Group | Control Group |
| Four-year college | 11 | 8 | 15 | 12 | — [b] | — [b] |
| Two- or four-year college | 21 | 18 | 31 | 25 | 34 | 28 |
| College, vocational/technical school, apprenticeship, armed forces | 32 | 26 | 42 | 34 | 47 | 38 |
| Postsecondary training or good job | 48 | 43 | 56 | 47 | 61 | 52 |
| Postsecondary training or any job | 66 | 61 | 70 | 63 | 75 | 67 |
| Postsecondary training or high school | 47 | 43 | 57 | 51 | 62 | 55 |
| Postsecondary training or high school or GED class | 54 | 48 | 64 | 55 | 69 | 59 |
| Postsecondary training or high school or GED class or good job | 68 | 65 | 76 | 69 | 81 | 73 |
| Postsecondary training or high school or GED class or any job | 84 | 80 | 88 | 82 | 93 | 87 |

SOURCE: Telephone survey.

NOTE: The evaluation sample had 580 QOP enrollees and 489 controls.

[a] In the last seven rows of the table, "college" means either a two-year or a four-year college. "Postsecondary training" means college, apprenticeship, vocational/technical school, or armed forces. A "good" job offers employer-sponsored health insurance.

[b] There are no estimates in the last two columns of the first row because the survey question about applying to college did not differentiate between two- and four-year colleges.

TABLE V.4

SHORT-TERM IMPACTS ON POSTSECONDARY ACTIVITIES
(Percentage points)

| Outcome [a] | Alternative Definitions of College Training | | |
|---|---|---|---|
| | Attending | Attending or Accepted | Attending, Accepted, or Applied |
| Four-year college | 3 | 3 | — [b] |
| Two- or four-year college | 3 | 6* | 6* |
| College, vocational/technical school, apprenticeship, armed forces | 6* | 8** | 9** |
| Postsecondary training or good job | 5 | 9** | 9** |
| Postsecondary training or any job | 5 | 7** | 8** |
| Postsecondary training or high school | 4 | 6* | 7* |
| Postsecondary training or high school or GED class | 6* | 9** | 9*** |
| Postsecondary training or high school or GED class or good job | 3 | 7** | 7** |
| Postsecondary training or high school or GED class or any job | 3 | 6** | 6*** |

SOURCE: Telephone survey.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed in Table V.3. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] In the last seven rows of the table, "college" means either a two-year or a four-year college. "Postsecondary training" means college, apprenticeship, vocational/technical school, or armed forces. A "good" job offers employer-sponsored health insurance.

[b] There is no estimate in the last column of the first row because the survey question about applying to college did not differentiate between two- and four-year colleges.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# CHAPTER VI

# SHORT-TERM IMPACTS ON RISKY BEHAVIORS AND RESILIENCY FACTORS

**QOP did not significantly reduce risky behaviors.**

- QOP's impacts on gang-related activity and crime were zero or detrimental, but insignificant. Its impacts on the likelihood of being arrested or charged and the likelihood of having a child were beneficial, but also insignificant.

- According to data from the in-person survey, QOP significantly increased by seven percentage points the fraction of enrollees who had a drink and the fraction who used an illegal drug in the 30 days before the survey. However, some evidence suggests that there were differences between QOP enrollees and control-group youth in the accuracy with which they reported risky behaviors. Those differences might have contributed substantially to the estimated detrimental impacts on drinking and drug use. That QOP might not have increased drinking and drug use is also suggested by data from the telephone survey. According to those data, QOP had beneficial—but not significant—impacts on drinking and drug use.

**QOP significantly increased one resiliency factor.**

- QOP significantly increased by 31 percentage points the fraction of enrollees reporting participation in a special program that helped them. Nevertheless, slightly less than half (47 percent) of QOP enrollees reported participating in "special programs other than your normal high school classes…[that try] to help students stay in school, make good grades, stay away from drugs, prepare for work or college, and make good decisions in life." This might reflect the fact that participation in QOP activities fell substantially short of the program's goal, especially by the fourth year of the demonstration when we asked the youth in the evaluation sample about their participation in special programs.

- QOP did not significantly increase the likelihood that an enrollee perceived himself or herself as being positively influenced by a caring adult. It also did not significantly improve resiliency factors such as having an optimistic outlook on the future or believing that risky behaviors are wrong.

## RISKY BEHAVIORS

QOP emphasized mentoring and offered developmental activities, in part, to reduce the likelihood that enrollees would engage in risky behaviors such as substance abuse, crime, and teenage childbearing. We found that QOP generally did not achieve this objective.

In both the in-person and telephone surveys, we obtained data on the incidence of risky behaviors among QOP enrollees and control-group youth. Table VI.1 presents the impacts of QOP on substance abuse estimated from in-person survey data. We found that QOP increased the fraction of youth who had a drink in the 30 days before the survey by seven percentage points. It increased by the same amount the fraction of youth who had used an illegal drug in the 30 days before the survey. Both of these impacts were statistically significant. QOP had a detrimental but insignificant impact on binge drinking (defined as consuming five or more drinks in a row). According to the impact estimates derived from telephone survey data and presented in Table VI.2, QOP had insignificant beneficial impacts on binge drinking and the use of any drug. A comparison of the estimated means in Tables VI.1 and VI.2 suggests that the incidence of drug use was likely underreported in the telephone survey. Furthermore, as discussed in Chapter VII, some of the available data suggest that there were differences between QOP enrollees and control-group youth in the accuracy with which they reported risky behaviors, and those differences might have contributed substantially to the significant detrimental impacts estimated from the in-person survey data. An alternative explanation is that the results were due to purely random baseline differences between the two groups for which we could not statistically adjust because the differences were not associated with any of the very limited number of baseline characteristics that could be measured. These considerations and the estimates obtained from the telephone survey data suggest that while QOP might not have increased substance abuse, it also did not decrease substance abuse.

Table VI.3 presents the impacts on gang activity, crime, and involvement with the criminal justice system that we have estimated from in-person survey data. The impacts on gang activity and crime were zero or detrimental, but not significant. The impact on the likelihood of ever being arrested or charged was beneficial, but also insignificant. The reference period for crimes was the year before the survey. Neither of the beneficial impacts on crime or involvement with the criminal justice system that we estimated from telephone survey data was significant, as shown in Table VI.4.

In Table VI.5, we present the impacts of QOP on several measures of sexual activity. Although QOP reduced the fraction of youth who had ever had sex and the fraction who had ever had a child, the impacts were not significant.

## RISK AND RESILIENCY FACTORS

QOP's efforts to influence risky behaviors may be viewed from the perspective of the juvenile justice literature as attempts to mitigate the risk factors in enrollees' social environments and strengthen the resiliency factors (U.S. Department of Justice 1995). The concepts of risk and resiliency factors are based on the belief that although youth are inherently inclined toward socially useful and productive behaviors, they can be led to crime or other risky behaviors by individuals in their homes, peer groups,

or neighborhoods. Such individuals might include a parent who is a substance abuser, a friend who invites the youth to participate in a criminal endeavor, and a neighborhood drug dealer. These individuals are risk factors. However, youth are not defenseless in their encounters with negative influences. Some youth are protected from negative influences by their relatives, friends, and adult mentors. Such individuals are resiliency factors.

As an adult mentor, the QOP case manager might have been a resiliency factor. The QOP program as a whole might also have been a resiliency factor. From that perspective, the results in Chapter V and, especially, the first part of this chapter provide an assessment of QOP's effectiveness as a resiliency factor. Although QOP was not successful in reducing risky behaviors, another approach to assessing QOP's effectiveness as a resiliency factor was to ask youth about whether they had a caring adult or a special program that helped them resist negative influences and about how the adult or program helped them.

QOP increased by an insignificant 3 percentage points, from 69 to 72 percent, the fraction of youth who had an "adult, besides a family member, who positively influenced your life in some significant way, for example, a teacher, counselor, coach, or minister." Although a substantial fraction (69 percent) of control-group youth had mentors—despite their not being in QOP—it is conceivable that their mentoring relationships were not as close and long-lasting and therefore as effective as the mentoring relationships for QOP enrollees. However, Table VI.6 shows that QOP enrollees were generally not significantly more likely to have a caring adult who helped them in specific ways. All of the impacts are positive, but only one is significant—QOP increased by seven percentage points the likelihood of having a caring adult who helped the youth "take advantage of opportunities to get ahead" in life.

QOP was a more effective resiliency factor as a social program than as a provider of a caring adult. As show in Table VI.7, QOP significantly increased by 31 percentage points, from 16 to 47 percent, the fraction of youth reporting participation in a helpful social program. QOP also increased significantly the likelihood that a youth reported participating in a social program that had a specific positive influence. Across the influences listed in Table VI.7, QOP's impacts ranged from 12 to 25 percentage points.

It is striking that despite these large impacts, slightly less than half (47 percent) of QOP enrollees reported participating in "special programs other than your normal high school classes…[that try] to help students stay in school, make good grades, stay away from drugs, prepare for work or college, and make good decisions in life." The discrepancies between the subjective impacts measured in Table VI.7 and the more objective impacts measured in other tables in this report are also striking. Perhaps these findings reflect the fact, documented in Chapter IV, that participation by enrollees in QOP activities fell substantially short of the program's goal. The shortfall was especially pronounced by the fourth year of the demonstration when we asked the youth in the evaluation sample about their participation in special programs. We note that although we asked about participation "since beginning the ninth grade," some youth might have reported about their current or recent participation status in responding to our in-person survey. As reported in Chapter IV, 36 percent of QOP enrollees were spending no time at all on QOP activities in the fourth year of the demonstration according to the MIS data.

When we assess whether QOP, as an external resiliency factor, produced internal resiliency factors in enrollees by fostering, for example, an optimistic outlook on the future and a clear sense of right and wrong, we found that QOP did not significantly improve internal resiliency factors (Table VI.8). The only significant impact was detrimental—a five-percentage-point increase in the fraction of youth dissatisfied with their physical appearance.

TABLE VI.1

SHORT-TERM IMPACTS ON SUBSTANCE ABUSE, IN-PERSON SURVEY

| Outcome[a] | QOP-Group Mean (percentage) | Control-Group Mean (percentage) | Impact (percentage points) |
|---|---|---|---|
| Drinking in the past 30 days | 40 | 33 | 7** |
| Frequent drinking in the past 30 days | 11 | 11 | 0 |
| Binge drinking in the past 30 days | 24 | 20 | 4 |
| Frequent binge drinking in the past 30 days | 7 | 5 | 2 |
| Drunk or high at school in the past 12 months | 20 | 20 | 0 |
| Used any illegal drug in the past 30 days | 34 | 28 | 7** |

SOURCE: In-person survey.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] "Binge" drinking means five or more drinks in a row. Drinking or binge drinking was classified as "frequent" if it occurred on at least eight out of the past 30 days.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE VI.2

SHORT-TERM IMPACTS ON SUBSTANCE ABUSE, TELEPHONE SURVEY

| Outcome[a] | QOP-Group Mean (percentage) | Control-Group Mean (percentage) | Impact (percentage points) |
|---|---|---|---|
| Binge drinking in the past 30 days | 19 | 23 | -4 |
| Frequent binge drinking in the past 30 days | 5 | 4 | 0 |
| Used any illegal drug in the past 30 days | 16 | 19 | -3 |

SOURCE: Telephone survey.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] "Binge" drinking means five or more drinks in a row. Drinking or binge drinking ass classified as "frequent" if it occurred on at least eight out of the past 30 days.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE VI.3

SHORT-TERM IMPACTS ON GANG ACTIVITY, CRIME, AND INVOLVEMENT WITH THE CRIMINAL JUSTICE SYSTEM, IN-PERSON SURVEY

| Outcome | QOP-Group Mean (percentage) | Control-Group Mean (percentage) | Impact (percentage points) |
|---|---|---|---|
| Involved in gang fight in the past 12 months | 16 | 14 | 2 |
| Ever a gang member | 13 | 13 | 0 |
| Currently a gang member | 6 | 4 | 2 |
| Committed any crime in the past 12 months | 31 | 28 | 3 |
| Ever arrested or charged | 25 | 29 | -5 |

SOURCE: In-person survey.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed. The evaluation sample had 580 QOP enrollees and 489 controls.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE VI.4

SHORT-TERM IMPACTS ON CRIME AND INVOLVEMENT WITH THE CRIMINAL JUSTICE SYSTEM, TELEPHONE SURVEY

| Outcome | QOP-Group Mean (percentage) | Control-Group Mean (percentage) | Impact (percentage points) |
|---|---|---|---|
| Committed any crime in the past 3 months | 10 | 11 | -1 |
| Arrested or charged in the past 3 months | 5 | 6 | -1 |

SOURCE: Telephone survey.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed. The evaluation sample had 580 QOP enrollees and 489 controls.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE VI.5

SHORT-TERM IMPACTS ON SEXUAL ACTIVITY

| Outcome | QOP-Group Mean (percentage) | Control-Group Mean (percentage) | Impact (percentage points) |
|---|---|---|---|
| Ever had sex | 78 | 83 | -5 |
| Did not use condom last time | 29 | 28 | 0 |
| Taught about HIV/AIDS | 93 | 94 | 0 |
| Ever pregnant or get anyone pregnant | 33 | 33 | 0 |
| Have had a child | 23 | 26 | -3 |

SOURCE: In-person survey and telephone survey.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed. The evaluation sample had 580 QOP enrollees and 489 controls.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE VI.6

SHORT-TERM IMPACTS ON HOW AN ADULT POSITIVELY INFLUENCED THE YOUTH'S LIFE

| Outcome | QOP-Group Mean (percentage) | Control-Group Mean (percentage) | Impact (percentage points) |
|---|---|---|---|
| There was an influential adult in my life | 72 | 69 | 3 |
| There was an influential adult who: [a] | | | |
| Respected my ideas and feelings | 41 | 38 | 3 |
| Helped me learn things that helped me do well in life | 43 | 41 | 2 |
| Helped me take advantage of opportunities to get ahead | 44 | 37 | 7** |
| Recognized and appreciated the things I did well in my life | 43 | 40 | 2 |
| Had clear expectations about what I do with my life | 37 | 36 | 1 |
| Showed me that fighting is not a good way to solve problems | 39 | 38 | 1 |
| Showed me that breaking the law does not help me achieve goals | 51 | 50 | 1 |
| Showed me that using drugs or alcohol is not a good way of solving problems | 51 | 49 | 2 |
| Had any of these positive influences | 66 | 64 | 1 |

SOURCE: In-person survey.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Respondents rated each statement as being definitely true, mostly true, mostly not true, or definitely not true. Percentages represent those who reported that the statement was definitely true.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE VI.7

SHORT-TERM IMPACTS ON PARTICIPATION IN SPECIAL PROGRAMS TO HELP STUDENTS

| Outcome | QOP-Group Mean (percentage) | Control-Group Mean (percentage) | Impact (percentage points) |
|---|---|---|---|
| Participated in such a program | 47 | 16 | 31*** |
| Program helped in the following ways: [a] | | | |
| Improve my grades | 19 | 7 | 12*** |
| Stay away from drugs or get off drugs | 29 | 11 | 19*** |
| Stay out of trouble | 27 | 11 | 16*** |
| Deal with police and courts | 19 | 6 | 12*** |
| Prepare for college | 33 | 11 | 22*** |
| Earn and save money | 33 | 9 | 25*** |
| Program helped in any of these ways | 43 | 14 | 29*** |

SOURCE: In-person survey.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Respondents were asked whether the program helped a lot, a little, or not at all along each of the listed dimensions. Percentages represent those who reported that the program helped a lot.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE VI.8

SHORT-TERM IMPACTS ON ATTITUDES TOWARD RISKY BEHAVIORS AND OUTLOOK ON LIFE

| Outcome | QOP-Group Mean (percentage) | Control-Group Mean (percentage) | Impact (percentage points) |
|---|---|---|---|
| Thought that the following activity is always wrong: [a] | | | |
| Using drugs or alcohol frequently | 57 | 57 | 0 |
| Committing crimes | 80 | 83 | -3 |
| Having a baby while a teenager | 36 | 35 | 1 |
| Dropping out of school | 75 | 74 | 0 |
| Thought that all of these activities are always wrong | 22 | 22 | 0 |
| | | | |
| Disagreed with the following statements: [b] | | | |
| Bad things happen to people like me | 83 | 80 | 3 |
| I'm afraid my life will be unhappy | 81 | 80 | 1 |
| I do not like the way I look | 83 | 88 | -5* |
| I'll probably die before I'm 30 | 90 | 89 | 1 |
| Disagreed with all of these statements | 61 | 57 | 3 |

SOURCE: In-person survey.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Respondents were asked whether the listed behavior was always wrong, sometimes wrong, or not wrong. Percentages represent those who reported that the activity was always wrong.

[b] Respondents were asked whether they strongly disagree, disagree, agree, or strongly agree with the statement. Percentages represent those who reported that they strongly disagreed or disagreed with the statement.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# CHAPTER VII

# SHORT-TERM IMPACTS ON SUBGROUPS

Some of QOP's impacts on females and some of its impacts on males were significantly different from zero. Although the significant impacts were beneficial for females and detrimental for males, QOP's impact on females was significantly different from its impact on males for only one key outcome, the likelihood of engaging in postsecondary education or training, attending high school or a GED class, or working.

QOP had significant beneficial impacts on both older and younger enrollees, and it did not consistently benefit one age group more than the other across a range of key outcomes. There was just one outcome for which the impacts were significantly different. QOP decreased by nine percentage points the fraction of younger enrollees who had a child. This impact was significantly different from both zero and the (insignificant) six-percentage-point increase in the fraction of older enrollees who had a child.

QOP had several significant impacts on enrollees in the middle third of the baseline grade distribution, and all of those impacts were beneficial. They included a 14-percentage-point increase in the likelihood of receiving a diploma, a 13-percentage-point increase in the likelihood of college attendance or acceptance, and an 8-percentage-point decrease in the likelihood of having a child. QOP had both significant beneficial and detrimental impacts on enrollees in the bottom third of the distribution, and it had only one significant impact—a detrimental impact—on enrollees in the top third of the distribution.

QOP's impacts varied from site to site. The Cleveland site had significant beneficial impacts and no significant detrimental impacts. The Washington, D.C.; Houston; and Memphis sites had significant detrimental impacts and no significant beneficial impacts. The Philadelphia site had both significant beneficial and significant detrimental impacts. The Fort Worth site had no significant impacts, and the Yakima site had two impacts—one beneficial and one detrimental—that were significantly different from the impacts for the other six sites. Some of the detrimental impacts for sites might not have been attributable to QOP.

The impacts for the whole QOP demonstration were substantially—but not entirely—attributable to the impacts of the Philadelphia site alone or the Philadelphia and Yakima sites—the Ford-funded sites—together. The five DOL-funded sites had just one significant impact—they increased by seven percentage points the likelihood that a QOP enrollee graduated from high school. This impact on one of QOP's primary outcomes was not significantly different from the impact for the two Ford-funded sites. The Ford-funded sites had four significant beneficial impacts: a 2-percentile-point increase in the mathematics achievement test score, a 14-percentage-point increase in the likelihood of engaging in postsecondary education or training, a 17-percentage-point increase in the likelihood of engaging in postsecondary education or training or working at a good job, and a 14-percentage-point decrease in the likelihood of having a child. The Ford-funded sites also had three significant detrimental impacts: 17-, 14-, and 16-percentage-point increases in the likelihood of engaging in binge drinking, using an illegal drug, and committing a crime, respectively. However, these detrimental impacts might not have been attributable to QOP.

## SHORT-TERM IMPACTS BY SEX

Both of QOP's significant impacts on male enrollees were detrimental (Table VII.1). QOP significantly decreased high school GPAs and increased binge drinking. Although the impacts on these two outcomes for females were not significantly different from the impacts for males, they were sufficiently different that the impacts for males and females combined were not significantly different from zero, as reported in Table VII.1 and discussed in Chapters V and VI.

In contrast to the significant impacts on male enrollees, both of QOP's significant impacts on female enrollees were beneficial. QOP significantly increased by nine percentage points the likelihood that a female enrollee graduated from high school. This impact was five percentage points higher but not significantly different from the impact on males. QOP's other significant impact on females was a nine-percentage-point increase in the likelihood of engaging in postsecondary education or training, attending high school or a GED class, or working. This impact was significantly different from the (insignificant) two-percentage-point decrease for males. Because of this difference in the impacts for males and females, the impact for all QOP enrollees was smaller than the impact for females and not significantly different from zero. As shown in Table VII.1, QOP's impact on females was significantly different from its impact on males for only this one key outcome.

Although QOP had significant impacts on four outcomes for all enrollees, it had a significant impact on just one of the outcomes for either males or females. The main reason is that the sample size for each subgroup is substantially smaller (by about 50 percent) than the size of the entire evaluation sample, generally reducing the precision of impact estimates and making it more difficult to be confident that an estimated impact was significantly different from zero.

## SHORT-TERM IMPACTS BY AGE WHEN ENTERING NINTH GRADE

About one-third of the youth in the QOP demonstration were over age 14 when they entered ninth grade, and QOP had two significant impacts on these older enrollees (Table VII.2). QOP increased by 10 percentage points the likelihood that an older enrollee engaged in postsecondary education or training, attended high school or a GED class, or worked. The program reduced by 11 percentage points the likelihood that an older enrollee had ever been arrested or charged with a crime. Although the impacts for younger enrollees were 9 and 8 percentage points smaller, respectively, than the impacts for older enrollees, the differences were not statistically significant.

For younger enrollees, QOP significantly increased by 12 percentage points the likelihood of earning a high school diploma. This impact was not significantly different from the impact for older enrollees. QOP significantly increased by 7 percentage points the likelihood of engaging in postsecondary education or training and the likelihood of college attendance or acceptance for younger enrollees. The impacts on these two outcomes—like the impact on high school graduation—were also significant for all enrollees (about two-thirds of whom are younger enrollees).

There was one significant difference between the impacts for older and younger enrollees. QOP significantly decreased by nine percentage points the likelihood that a younger enrollee had a child. In

contrast, QOP increased by six percentage points the likelihood that an older enrollee had a child. Although this impact for older enrollees was not significantly different from zero, it was significantly different from the impact for younger enrollees.

Among the younger enrollees, nearly 85 percent were age 14, and the rest were age 13. Among the older enrollees, nearly 85 percent were age 15, and almost all of the rest were age 16.

## SHORT-TERM IMPACTS BY RANK IN THE BASELINE GRADE DISTRIBUTION

When assessing impacts for the subgroups defined by rank in the baseline grade distribution, it is important to remember that to be eligible for QOP, a youth had to be in the bottom two-thirds of the grade distribution based on grades from the eighth grade. Thus, youth in the bottom third of the baseline grade distribution for QOP eligibles were at or below the 22nd percentile in the distribution for all youth, including those who were not eligible for QOP based on their grades. Likewise, the youth in the middle and top thirds of the baseline grade distribution for QOP eligibles were between the 22nd and the 44th percentiles and between the 44th and the 66th percentiles, respectively, in the grade distribution for all youth.

Across these three subgroups of enrollees, QOP's impacts varied (Table VII.3). The program was more successful for enrollees in the middle of the distribution than for enrollees at the top or bottom of the distribution.

QOP had just one significant impact on enrollees in the top third of the baseline grade distribution. It increased by eight percentage points the likelihood of binge drinking. The impacts on other outcomes pertaining to risky behaviors were also detrimental, but those impacts were not significant.

For enrollees in the bottom third of the baseline grade distribution, QOP increased by 9 percentage points the likelihood of engaging in postsecondary education or training and decreased by 11 percentage points the likelihood of ever being arrested or charged with a crime. In contrast to these significant beneficial impacts, QOP increased by 14 percentage points the likelihood of using an illegal drug. This detrimental impact was significantly different from zero and from the impact on enrollees in the top two-thirds of the grade distribution. For enrollees in the bottom third of the grade distribution, QOP's detrimental impact on attending or being accepted into a college was also significantly different from the impact for other enrollees, although it was not significantly different from zero.

All of the significant impacts on enrollees in the middle third of the baseline grade distribution were beneficial. The program increased both high school graduation and completion rates. It increased by 14 percentage points the likelihood of earning a diploma and by 11 percentage points the likelihood of earning a diploma or a GED certificate. QOP increased by 13 percentage points the likelihood of attending or being accepted into college, and it decreased by 8 percentage points the likelihood of having a child. All four of these impacts are significantly different from zero. They are larger by at least several percentage points but not significantly different from the impacts for other enrollees. In contrast, the impacts on binge drinking and drug use by enrollees in the middle third of the grade distribution are significantly different from the impacts for other enrollees. However, the reductions of four percentage points in binge drinking and two percentage points in drug use are not significantly different from zero.

## SHORT-TERM IMPACTS BY SITE

The impacts for the whole QOP demonstration were substantially—but not entirely—attributable to the impacts of the Philadelphia site alone or, as we discuss in the next section, the two Ford-funded sites, Philadelphia and Yakima. Although many of the seemingly large differences among the impacts shown in Table VII.4 are not significant because the sample sizes for each site are fairly small, Philadelphia's impact was the largest or about equal to the largest for all of the outcomes pertaining to postsecondary activities and for four of the five outcomes pertaining to risky behaviors. Nevertheless, according to estimates for the other six sites combined (not shown in Table VII.4), those six sites had two significant impacts, and both were beneficial. The six sites increased by seven percentage points the likelihood of receiving a diploma and decreased by six percentage points the likelihood of ever being arrested or charged with a crime. For both of these outcomes, Philadelphia's impact was not significantly different from the impact for the other six sites, as documented in Table VII.4.

The Philadelphia site had two significant beneficial impacts and two significant detrimental impacts. The beneficial impacts were a 19-percentage-point increase in the likelihood of engaging in postsecondary education or training and a 22-percentage-point increase in the likelihood of engaging in postsecondary education or training, attending high school or a GED class, or working. The latter impact was significantly different from the impact for the other six sites combined. The two significant detrimental impacts for the Philadelphia site were also significantly different from the impacts for the other six sites combined. The Philadelphia site increased by 17 percentage points the likelihood of binge drinking and by 18 percentage points the likelihood of committing a crime.

Examining the QOP-group and control-group means for some of the risky behaviors in Tables VII.5 and VII.6 suggests, however, that it is possible—and maybe likely—that such detrimental impacts were not caused by QOP. The estimated means reveal that there might have been differences between QOP enrollees and control-group youth in the accuracy with which they reported risky behaviors, and those differences might have contributed substantially to the estimated detrimental impacts on risky behaviors for some sites and the demonstration as a whole. Specifically, some of the control-group means pertaining to drinking, drug use, and crime were unusually and, perhaps, implausibly low. In the Philadelphia site, only 3 percent and 12 percent of control-group youth reported having a drink or taking an illegal drug, respectively, in the 30 days before the in-person survey. In the other six sites combined, the rates of drinking and drug use among control-group youth were substantially higher—38 percent and 30 percent, respectively. QOP's impact on drinking was a significant 30-percentage-point increase in the Philadelphia site and an insignificant 3-percentage-point increase in the other six sites combined. For drug use, the respective impacts were insignificant 13- and 5-percentage-point increases. In addition to the relatively low rates of drinking and drug use among control-group youth in the Philadelphia site, 14 percent of those youth reported committing a crime in the year before the in-person survey, while the fraction was much higher—31 percent—for control-group youth in the other six sites combined. While QOP's impact on crime was a significant 18-percentage-point increase in the Philadelphia site, it was an insignificant 1-percentage-point increase in the other six sites combined. Finally, while the rates of binge drinking among control-group youth were 2 percent and 6 percent in the Philadelphia and Memphis sites, respectively, the rate for the other five sites combined was 27 percent. Like the Philadelphia site, the Memphis site had a significant detrimental impact on binge drinking according to the in-person survey data.

As suggested above, these results might have been attributable to differences in the accuracy with which QOP enrollees and control-group youth reported risky behaviors. An alternative explanation is that the results were due to purely random baseline differences between the two groups for which we could not statistically adjust because the differences were not associated with any of the very limited number of baseline characteristics that could be measured. Regression-adjusted impact estimates for the whole demonstration are presented in Appendix F.

The patterns of differences in control-group means just discussed and the Philadelphia and Memphis sites' significant detrimental impacts on some risky behaviors were observed in data from the in-person survey. According to the telephone survey data, neither the Philadelphia site nor the Memphis site had significant detrimental impacts on risky behaviors (Table VII.7). However, neither site significantly reduced such behaviors. Also, while drug use increased in the Houston site by an insignificant 10 percentage points according to the in-person survey data, it increased by a significant 15 percentage points according to the telephone survey data.

According to Table VII.4, the Cleveland site had three significant impacts on enrollees, and all three were beneficial. The program in Cleveland increased by 13 percentage points both the likelihood of earning a diploma and the likelihood of college attendance or acceptance. It decreased by 16 percentage points the likelihood of binge drinking among enrollees.

The Fort Worth; Washington, D.C.; Houston; and Memphis sites did not have any beneficial impacts that were significantly different from zero, although the 13-percentage-point decrease in the likelihood of binge drinking by enrollees in Fort Worth was significantly different from the impact on binge drinking for the other six sites combined. The Washington, D.C.; Houston; and Memphis sites had one significant detrimental impact. In the Washington, D.C., site, the detrimental impact was a decrease of over 2 percentile points in the average mathematics achievement test score. In the Houston site, the detrimental impact was a one-quarter-point decrease in the average GPA. And, in the Memphis site, QOP youth were 18 percentage points more likely than the control-group youth to engage in binge drinking, although this impact might not be attributable to QOP, as noted above. The Yakima site had one impact that was significantly different from zero, and it was beneficial—an increase of over 3 percentile points in the average mathematics achievement test score. However, the decrease of 13 percentage points in the likelihood that Yakima enrollees engaged in postsecondary education or training, attended high school or a GED class, or worked is significantly different from the impact on this outcome for the other six sites combined.

## SHORT-TERM IMPACTS BY FUNDING SOURCE

The five DOL-funded QOP sites collectively had just one significant impact, and it was beneficial (Table VII.8). The sites increased by seven percentage points the likelihood that an enrollee graduated from high school. This estimated impact on one of QOP's primary outcomes was not significantly different from the estimated impact for the two Ford-funded sites, which was also an increase of seven percentage points. All of the estimated impacts on postsecondary activities and risky behaviors were within five percentage points of zero for the DOL-funded sites.

In contrast, the Ford-funded QOP sites had seven significant impacts. Four of those impacts were beneficial, and three were detrimental. Five of the seven impacts were significantly different from the impacts for the DOL-funded sites.

The Ford-funded sites increased by nearly 2 percentile points the average mathematics achievement test score. They also increased by 14 percentage points the likelihood of engaging in postsecondary education or training and by 17 percentage points the likelihood of engaging in postsecondary education or training or working at a good job, that is, a job offering employer-sponsored health insurance.

The Ford-funded sites had significant impacts on four of the five risky behaviors listed in Table VII.8, and one of those impacts was beneficial. The two sites together decreased by 14 percentage points the likelihood that an enrollee had a child. In contrast, they increased by 17, 14, and 16 percentage points the likelihood of binge drinking, using an illegal drug, and committing a crime, respectively. As discussed above, these detrimental impacts might be partly attributable to unusually low control-group means in the Philadelphia site and not to QOP. However, the detrimental impacts in the Yakima site were about the same size as the detrimental impacts in the Philadelphia site, although the impacts in the Yakima site were not statistically significant.

TABLE VII.1

SHORT-TERM IMPACTS BY SEX
(Percentage points except where noted)

| Outcome[a] | Impacts | | |
|---|---|---|---|
| | Male | Female | Total Sample |
| Mathematics test score (percentile) | 0.72 | 0.08 | 0.38 |
| Reading test score (percentile) | 1.10 | 0.06 | 0.50 |
| GPA (four-point scale) | -0.13** | -0.02 | -0.06 |
| Earned high school diploma | 4 | 9* | 7* |
| Earned diploma or GED certificate | 0 | 7 | 5 |
| Attending college | 3 | 2 | 3 |
| Attending postsecondary training | 7 | 4 | 6* |
| Postsecondary training or good job | 4 | 6 | 5 |
| Postsecondary training or high school or GED class or any job | -2† | 9†,** | 3 |
| Attending or accepted into college | 4 | 5 | 6* |
| Binge drinking in past 30 days | 7* | 0 | 4 |
| Used any illegal drug in past 30 days | 7 | 7 | 7** |
| Committed any crime in past 12 months | 5 | 2 | 3 |
| Ever arrested or charged | -8 | 0 | -5 |
| Have one or more own children | -3 | -5 | -3 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. "College" means either a two-year or a four-year college. "Postsecondary training" means college, vocational/technical school, apprenticeship, or armed forces. A "good" job offers employer-sponsored health insurance. "Binge" drinking means five or more drinks in a row.

† Significantly different from the impact on all other youth at the 90% confidence level, two-tailed test

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE VII.2

SHORT-TERM IMPACTS BY AGE WHEN ENTERING NINTH GRADE
(Percentage points except where noted)

| Outcome[a] | Impacts | | |
|---|---|---|---|
| | Age > 14 | Age ≤ 14 | Total Sample |
| Mathematics test score (percentile) | 0.55 | 0.72 | 0.38 |
| Reading test score (percentile) | 0.96 | 0.67 | 0.50 |
| GPA (four-point scale) | -0.06 | -0.02 | -0.06 |
| Earned high school diploma | 0 | 12*** | 7* |
| Earned diploma or GED certificate | 6 | 7 | 5 |
| Attending college | 3 | 5 | 3 |
| Attending postsecondary training | 7 | 7* | 6* |
| Postsecondary training or good job | 8 | 6 | 5 |
| Postsecondary training or high school or GED class or any job | 10* | 1 | 3 |
| Attending or accepted into college | 5 | 7* | 6* |
| Binge drinking in past 30 days | 5 | 4 | 4 |
| Used any illegal drug in past 30 days | 8 | 5 | 7** |
| Committed any crime in past 12 months | -4 | 5 | 3 |
| Ever arrested or charged | -11* | -3 | -5 |
| Have one or more own children | 6† | -9†,** | -3 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. "College" means either a two-year or a four-year college. "Postsecondary training" means college, vocational/technical school, apprenticeship, or armed forces. A "good" job offers employer-sponsored health insurance. "Binge" drinking means five or more drinks in a row.

† Significantly different from the impact on all other youth at the 90% confidence level, two-tailed test

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE VII.3

SHORT-TERM IMPACTS BY RANK IN THE BASELINE GRADE DISTRIBUTION
(Percentage points except where noted)

| | Impacts | | | |
|---|---|---|---|---|
| Outcome[a] | Bottom Third | Middle Third | Top Third | Total Sample |
| Mathematics test score (percentile) | 0.06 | 0.28 | 0.04 | 0.38 |
| Reading test score (percentile) | 0.27 | -0.17 | 0.91 | 0.50 |
| GPA (four-point scale) | -0.13 | -0.06 | 0.03 | -0.06 |
| Earned high school diploma | 3 | 14** | 4 | 7* |
| Earned diploma or GED certificate | 1 | 11* | 3 | 5 |
| Attending college | -2 | 7 | 4 | 3 |
| Attending postsecondary training | 9* | 3 | 4 | 6* |
| Postsecondary training or good job | 7 | 9 | -4† | 5 |
| Postsecondary training or high school or GED class or any job | 8 | 1 | 0 | 3 |
| Attending or accepted into college | -3† | 13** | 9 | 6* |
| Binge drinking in past 30 days | 8 | -4† | 8* | 4 |
| Used any illegal drug in past 30 days | 14†, ** | -2† | 7 | 7** |
| Committed any crime in past 12 months | 2 | 4 | 8 | 3 |
| Ever arrested or charged | -11* | 0 | 1 | -5 |
| Have one or more own children | -4 | -8* | 3 | -3 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. "College" means either a two-year or a four-year college. "Postsecondary training" means college, vocational/technical school, apprenticeship, or armed forces. A "good" job offers employer-sponsored health insurance. "Binge" drinking means five or more drinks in a row.

† Significantly different from the impact on all other youth at the 90% confidence level, two-tailed test

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE VII.4

SHORT-TERM IMPACTS BY SITE
(Percentage points except where noted)

| | Impacts | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Outcome[a] | Fort Worth | Cleveland | D.C. | Houston | Memphis | Philadelphia | Yakima | Total Sample |
| Mathematics test score (percentile) | 0.16 | 0.39 | -2.14†, ** | 0.58 | -0.21 | 0.69 | 3.23†, * | 0.38 |
| Reading test score (percentile) | -0.46 | -0.43 | 1.85 | 0.47 | -0.39 | 1.25 | 1.30 | 0.50 |
| GPA (four-point scale) | 0.04 | -0.10 | -0.15 | -0.25†, ** | 0.07 | -0.13 | 0.09 | -0.06 |
| Earned high school diploma | 2 | 13* | 12 | 3 | 1 | 10 | 4 | 7* |
| Earned diploma or GED certificate | 6 | 7 | 6 | -2 | 4 | 10 | 1 | 5 |
| Attending college | 3 | 8 | -9† | 3 | 2 | 13 | 4 | 3 |
| Attending postsecondary training | 6 | 2 | -2 | 1 | 6 | 19* | 8 | 6* |
| Postsecondary training or good job | -1 | -3 | 4 | -3 | 2 | 17 | 17 | 5 |
| Postsecondary training or high school or GED class or any job | 9 | -4 | 12 | 4 | -6† | 22†, ** | -13† | 3 |
| Attending or accepted into college | 2 | 13* | -2 | 2 | 4 | 17 | 5 | 6* |
| Binge drinking in past 30 days | -13† | -16†, * | -3 | 9 | 18†, *** | 17†, ** | 18 | 4 |
| Used any illegal drug in past 30 days | 8 | -6 | -1 | 10 | 8 | 13 | 14 | 7** |
| Committed a crime in past 12 months | -5 | -7 | 6 | 2 | -7 | 18†, * | 14 | 3 |
| Ever arrested or charged | -4 | 1 | -12 | -1 | -11 | 3 | -9 | -5 |
| Have one or more own children | -3 | 3 | -4 | 4 | 6 | -15 | -13 | -3 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed in Tables VII.5 and VII.6. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. "College" means either a two-year or a four-year college. "Postsecondary training" means college, vocational/technical school, apprenticeship, or armed forces. A "good" job offers employer-sponsored health insurance. "Binge" drinking means five or more drinks in a row.

† Significantly different from the impact for all other sites at the 90% confidence level, two-tailed test

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE VII.5

QOP-GROUP MEANS BY SITE
(Percentages except where noted)

| | Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Outcome[a] | Fort Worth | Cleveland | D.C. | Houston | Memphis | Philadelphia | Yakima | Total Sample |
| Mathematics test score (percentile) | 44.5 | 40.6 | 38.5 | 39.3 | 38.2 | 37.0 | 47.7 | 40.9 |
| Reading test score (percentile) | 45.6 | 43.1 | 43.4 | 41.4 | 41.9 | 41.0 | 46.3 | 43.2 |
| GPA (four-point scale) | 2.65 | 1.86 | 1.79 | 2.16 | 2.09 | 2.04 | 2.34 | 2.13 |
| Earned high school diploma | 67 | 36 | 35 | 32 | 50 | 57 | 47 | 46 |
| Earned diploma or GED certificate | 74 | 42 | 41 | 39 | 60 | 57 | 64 | 54 |
| Attending college | 25 | 15 | 19 | 15 | 19 | 31 | 27 | 21 |
| Attending postsecondary training | 35 | 24 | 28 | 22 | 30 | 42 | 41 | 32 |
| Postsecondary training or good job | 58 | 40 | 41 | 39 | 53 | 49 | 58 | 48 |
| Postsecondary training or high school or GED class or any job | 91 | 84 | 84 | 83 | 83 | 85 | 77 | 84 |
| Attending or accepted into college | 31 | 26 | 33 | 21 | 32 | 43 | 32 | 31 |
| Binge drinking in past 30 days | 26 | 17 | 12 | 25 | 24 | 19 | 47 | 24 |
| Used any illegal drug in past 30 days | 29 | 34 | 36 | 39 | 34 | 25 | 41 | 34 |
| Committed a crime in past 12 months | 30 | 34 | 28 | 29 | 29 | 32 | 38 | 31 |
| Ever arrested or charged | 21 | 35 | 20 | 23 | 21 | 30 | 23 | 25 |
| Have one or more own children | 12 | 27 | 18 | 31 | 30 | 29 | 10 | 23 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

NOTE: The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. "College" means either a two-year or a four-year college. "Postsecondary training" means college, vocational/technical school, apprenticeship, or armed forces. A "good" job offers employer-sponsored health insurance. "Binge" drinking means five or more drinks in a row.

TABLE VII.6

CONTROL-GROUP MEANS BY SITE
(Percentages except where noted)

| | Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Outcome[a] | Fort Worth | Cleveland | D.C. | Houston | Memphis | Philadelphia | Yakima | Total Sample |
| Mathematics test score (percentile) | 44.4 | 40.2 | 40.7 | 38.7 | 38.5 | 36.4 | 44.5 | 40.5 |
| Reading test score (percentile) | 46.0 | 43.5 | 41.5 | 41.0 | 42.3 | 39.8 | 45.0 | 42.7 |
| GPA (four-point scale) | 2.61 | 1.96 | 1.94 | 2.41 | 2.02 | 2.17 | 2.25 | 2.19 |
| Earned high school diploma | 64 | 23 | 22 | 29 | 49 | 47 | 43 | 40 |
| Earned diploma or GED certificate | 67 | 34 | 35 | 41 | 56 | 47 | 62 | 49 |
| Attending college | 21 | 7 | 28 | 12 | 17 | 18 | 23 | 18 |
| Attending postsecondary training | 30 | 22 | 31 | 20 | 24 | 23 | 33 | 26 |
| Postsecondary training or good job | 58 | 43 | 36 | 42 | 51 | 32 | 41 | 43 |
| Postsecondary training or high school or GED class or any job | 82 | 88 | 71 | 80 | 89 | 64 | 90 | 80 |
| Attending or accepted into college | 29 | 13 | 35 | 19 | 29 | 25 | 27 | 25 |
| Binge drinking in past 30 days | 39 | 34 | 16 | 17 | 6 | 2 | 29 | 20 |
| Used any illegal drug in past 30 days | 21 | 41 | 37 | 29 | 26 | 12 | 27 | 28 |
| Committed a crime in past 12 months | 35 | 41 | 23 | 27 | 35 | 14 | 24 | 28 |
| Ever arrested or charged | 25 | 34 | 31 | 24 | 31 | 28 | 31 | 29 |
| Have one or more own children | 15 | 24 | 23 | 27 | 24 | 44 | 23 | 26 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

NOTE: The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. "College" means either a two-year or a four-year college. "Postsecondary training" means college, vocational/technical school, apprenticeship, or armed forces. A "good" job offers employer-sponsored health insurance. "Binge" drinking means five or more drinks in a row.

TABLE VII.7

SHORT-TERM IMPACTS ON RISKY BEHAVIORS BY SITE, TELEPHONE SURVEY

| Outcome[a] | Fort Worth | Cleveland | D.C. | Houston | Memphis | Philadelphia | Yakima | Total Sample |
|---|---|---|---|---|---|---|---|---|
| | | | | QOP-Group Mean (percentage) | | | | |
| Binge drinking in past 30 days | 26 | 11 | 9 | 29 | 16 | 5 | 37 | 19 |
| Used any illegal drug in past 30 days | 8 | 24 | 18 | 21 | 14 | 12 | 17 | 16 |
| Committed a crime in past 3 months | 8 | 13 | 6 | 12 | 13 | 5 | 12 | 10 |
| Arrested or charged in past 3 months | 2 | 11 | 3 | 9 | 1 | 2 | 5 | 5 |
| | | | | Control-Group Mean (percentage) | | | | |
| Binge drinking in past 30 days | 27 | 32 | 13 | 28 | 19 | 8 | 34 | 23 |
| Used any illegal drug in past 30 days | 15 | 31 | 32 | 6 | 20 | 13 | 18 | 19 |
| Committed a crime in past 3 months | 10 | 15 | 10 | 7 | 8 | 13 | 13 | 11 |
| Arrested or charged in past 3 months | 3 | 14 | 4 | 5 | 8 | 5 | 3 | 6 |
| | | | | Impact (percentile points) | | | | |
| Binge drinking in past 30 days | -1 | -21†, *** | -4 | 1 | -2 | -3 | 3 | -4 |
| Used any illegal drug in past 30 days | -7 | -8 | -14 | 15†, *** | -6 | -1 | -1 | -3 |
| Committed a crime in past 3 months | -2 | -1 | -3 | 5 | 5 | -8 | -1 | -1 |
| Arrested or charged in past 3 months | -1 | -4 | -1 | 4 | -7†, ** | -3 | 2 | -1 |

SOURCE: Telephone survey.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean prior to rounding those means; thus, an impact might not equal the difference between the rounded means that are displayed. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] "Binge" drinking means five or more drinks in a row.

† Significantly different from the impact for all other sites at the 90% confidence level, two-tailed test

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE VII.8

SHORT-TERM IMPACTS BY FUNDING SOURCE
(Percentage points except where noted)

| Outcome[a] | Impacts | | |
|---|---|---|---|
| | Ford-Funded Sites | DOL-Funded Sites | Total Sample |
| Mathematics test score (percentile) | 1.96†,* | -0.24† | 0.38 |
| Reading test score (percentile) | 1.27 | 0.21 | 0.50 |
| GPA (four-point scale) | -0.02 | -0.08 | -0.06 |
| Earned high school diploma | 7 | 7* | 7* |
| Earned diploma or GED certificate | 6 | 4 | 5 |
| Attending college | 8 | 1 | 3 |
| Attending postsecondary training | 14* | 3 | 6* |
| Postsecondary training or good job | 17†,** | 0† | 5 |
| Postsecondary training or high school or GED class or any job | 4 | 3 | 3 |
| Attending or accepted into college | 11 | 3 | 6* |
| Binge drinking in past 30 days | 17†,*** | -1† | 4 |
| Used any illegal drug in past 30 days | 14** | 4 | 7** |
| Committed any crime in past 12 months | 16†,** | -2† | 3 |
| Ever arrested or charged | -3 | -5 | -5 |
| Have one or more own children | -14†,** | 1† | -3 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. "College" means either a two-year or a four-year college. "Postsecondary training" means college, vocational/technical school, apprenticeship, or armed forces. A "good" job offers employer-sponsored health insurance. "Binge" drinking means five or more drinks in a row.

† Significantly different from the impact for sites with the other funding source at the 90% confidence level, two-tailed test

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

# REFERENCES


Aquilino, William S. "Interview Mode Effects in Surveys of Drug and Alcohol Use." *Public Opinion Quarterly*, vol. 58, 1994, pp. 210–240.

Bloom, Howard. "Accounting for No-Shows in Experimental Evaluation Designs." *Evaluation Review*, vol. 8, 1984.

Carlson, Barbara, Brenda Cox, and Linda Bandeh. "SAS Macros Useful in Imputing Missing Survey Data." *Proceedings of the Twentieth Annual SAS Users Group International Conference.* Cary, NC: SAS Institute, Inc., 1995.

Maxfield, Myles, Laura Castner, Vida Maralani, and Mary Vencill. "The Quantum Opportunity Program Demonstration: Implementation Findings." Washington, DC: Mathematica Policy Research, Inc., 2003a.

Maxfield, Myles, Allen Schirm, and Nuria Rodriguez-Planas. "The Quantum Opportunity Program Demonstration: Implementation and Short-Term Impacts." Washington, DC: Mathematica Policy Research, Inc., 2003b.

Schochet, Peter Z., John Burghardt, and Steven Glazerman. "National Job Corps Study: The Impacts of Job Corps on Participants' Employment and Related Outcomes." Princeton, NJ: Mathematica Policy Research, Inc., 2001.

_____. "National Job Corps Study: The Short-Term Impacts of Job Corps on Participants' Employment and Related Outcomes." Princeton, NJ: Mathematica Policy Research, Inc., 2000.

U.S. Department of Justice. "Guide for Implementing the Comprehensive Strategy for Serious, Violent, and Chronic Juvenile Offenders." Washington, DC: U.S. Department of Justice, 1995.

U.S. General Accounting Office. "At-Risk and Delinquent Youths: Fiscal Year 1998 Programs." Report no. GAO/HEHS-99-88R. Washington, DC: U.S. General Accounting Office, March 1999.

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# APPENDIX A

# OBTAINING AN EVALUATION SAMPLE AND CONDUCTING RANDOM ASSIGNMENT

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

Four steps led up to and concluded with random assignment: (1) developing lists of eligibles, (2) initial sampling, (3) obtaining consent, and (4) random assignment. These steps needed to be completed to obtain an evaluation sample for the QOP demonstration.

To implement the four steps in the seven sites, we developed an individualized Student Selection Plan (SSP) for each site by customizing a generic plan to accommodate local circumstances. Exhibit A.1 displays the generic plan. As it turned out, few accommodations to local circumstances were required; therefore, all of the SSPs were similar. The main differences in the sites' SSPs concerned the number of QOP schools, how QOP slots were allocated across schools, and the dates of sampling and random assignment. In the three sites with more than one QOP school, the QOP CBO was responsible for determining how slots would be allocated across the schools.

Although random assignment was successfully implemented in the seven demonstration sites, the sites encountered three main problems in implementing the evaluation design: (1) developing accurate lists of eligibles, (2) contacting students, and (3) collecting completed forms. In the remainder of this appendix, we discuss these implementation problems in the context of the four steps listed earlier. Although we present examples from individual sites, the examples usually illustrate experiences common to most or all sites.

## DEVELOPING LISTS OF ELIGIBLES

As shown in the model SSP, the generic instruction to each site was as follows:

> *Each school should compile a list of students who have entered the 9th grade for the first time in the current academic year and send the list to MPR. For every student, the list should include at least two pieces of identifying information and the students' 8th grade GPA.*

Fulfillment of this instruction completed the site's responsibility. Then:

> *For each school, MPR will rank students—from highest to lowest—according to their GPAs from the 8th grade. The students in the bottom two-thirds of the GPA distribution for their school are eligible.*

Although seemingly straightforward, these first two steps in implementing the evaluation design were probably the most difficult. They might also prove to be among the more difficult steps in implementing an ongoing QOP program. There were two main problems in developing an accurate list of eligibles for a school: (1) determining current enrollment and (2) calculating GPAs.

### Determining Current Enrollment

As a rule, most QOP schools did not know precisely which students were enrolled in the ninth grade. The explanation was sporadic attendance by many students combined with high turnover, both from year to year and within a year, as students' families moved frequently.

EXHIBIT A.1

## Quantum Opportunity Program Student Selection Plan

This plan outlines the steps for selecting students for the Quantum Opportunity Program (Quantum). For each step, we have listed the responsibilities of local Quantum staff (including staff of the participating high schools) and the responsibilities of Mathematica Policy Research (MPR) staff.

### 1. Submitting Lists of Students.

**Quantum.** Each school should compile a list of students who have entered the 9th grade for the first time in the current academic year and send the list to MPR. For every student, the list should include at least two pieces of identifying information and the student's 8th grade GPA.

### 2. Identifying Eligible Students.

**MPR.** For each school, MPR will rank students—from highest to lowest—according to their grade point averages (GPAs) from the 8th grade. The students in the bottom two-thirds of the GPA distribution for their school are eligible for Quantum.

### 3. Selecting a Group of Eligible Students to Receive Quantum Information and Consent Packets.

**MPR.** MPR will randomly select a group of 132 eligible students from ABC High School and 88 eligible students from XYZ High School. MPR will send the list of selected students to Quantum staff on [date]. If permission is obtained from their parents, these students will be the study group. Only some (about half) of the students in the study group will later be selected, at random, to participate in the Quantum program.

### 4. Distributing Quantum Information and Consent Packets.

**Quantum.** Quantum staff should distribute Quantum information and consent packets to all 220 students in the prospective study group. The packet will contain a cover letter from the student's school, a brochure describing the Quantum program and the Quantum study, a consent form seeking parental permission for the student to participate in the study, and a locator form. Quantum staff should make copies of the cover letter (on school letterhead) and copies of the consent and locator forms and assemble the packets.

**MPR.** MPR will draft all materials for the Quantum information and consent packet. MPR will also make copies of the brochures and send these to Quantum staff.

**5. Collecting Completed Consent and Locator Forms.**

**Quantum.** Quantum staff should collect completed consent and locator forms. When a student returns completed forms, Quantum staff should attach preprinted labels for that student to the forms. It is important that completed consent and locator forms be obtained for all 132 students at ABC High School and 88 students at XYZ High School so that every interested student will have an opportunity to be considered for participation in the Quantum program. Quantum staff will be responsible for purchasing an incentive item and distributing it to students who promptly return completed consent and locator forms.

**MPR.** MPR will provide two preprinted labels for each student, one label for the consent form and one label for the locator form. MPR will pay for the incentive.

**6. Submitting Consent and Locator Forms.**

**Quantum.** Completed consent and locator forms should be sent to MPR at least weekly.

**7. Selecting Students for the Quantum Program.**

**MPR.** MPR will compile a list of all students for whom affirmative consent and a completed locator form have been obtained. The list will be sent to Quantum staff for verification.

**Quantum.** After verifying that the list of students with affirmative consent and completed locator forms is correct, Quantum staff should sign the list and send it to MPR.

**MPR.** From the list of students with affirmative consent and completed locator forms, MPR will randomly select 60 students from ABC High School and 40 students from XYZ High School to participate in the Quantum program. Students who are not randomly selected for the Quantum program will be assigned to the control group for the study. On [date], MPR will send lists of Quantum group students and control group students to Quantum staff.

**Quantum.** Quantum staff should notify all students about their group assignments (Quantum or control), and should inform MPR when all students have been notified. After notifying Quantum students of their selection, Quantum staff should begin recruiting them for participation in the Quantum program. Only students randomly selected for the Quantum group may participate in the Quantum program. Students assigned to the control group and students who did not receive or did not complete consent and locator forms cannot participate in the Quantum program. All students in the Quantum and control groups are part of the Quantum study.

**8. Submitting Lists of Quantum Participants.**

**Quantum.** To provide data for analyses of Quantum participation patterns, Quantum staff should send to MPR a list of all students participating in the Quantum program on the following dates: .... After [date], a list of Quantum participants should be submitted every twelve weeks.

If this plan meets with your approval, please sign below and return to MPR. If you have any questions concerning this plan or any other issues related to the study, please call [MPR site liaison] at [phone number]. Thank you for your assistance in developing this plan.

_____ _____

Quantum Coordinator Date

Although we considered requesting first-day-of-school enrollment lists, we learned from school and district staff that such lists would be unreliable.[1] Many students expected to enroll in a school do not do so, and many unexpected students enroll. Moreover, some students do not attend school for the first few weeks of the year, especially if school starts before Labor Day.

In lieu of a first-day-of-school enrollment list, we accepted the first properly constructed list (with grades) that a school could produce. Such a list typically became available a month or more after school started.[2]

Even several weeks into the school year, however, students continued to transfer from school to school, and some students had attended classes on only a few days. For example, five weeks into the school year, one QOP school constructed a list of ninth graders who were not repeating the ninth grade and were not ineligible because of a disability. The school constructed a second list of such students two weeks later. Nearly one out of every six students on the first list was not on the second list. However, out of every five students dropped, one was replaced by a new student. We suspect that many of the students that were dropped had left the school before the construction of the first list and that school record keeping was just catching up to student movements. Nevertheless, reports by school and QOP staff suggested that some dropped students and some added students probably had moved during the two-week period between lists.

Once a school had a list of currently enrolled ninth graders, "categorically ineligible" students—students repeating the ninth grade and disabled students for whom QOP would have been inappropriate in the school's judgment—had to be dropped from the list. Although a couple of schools neglected to drop a category of ineligible students in a first attempt to develop a list of eligibles, none of the schools in the demonstration appeared to have any significant difficulties in identifying categorically ineligible students.

## Calculating GPAs

After developing a list of currently enrolled ninth graders and dropping from the list categorically ineligible students, a school attempted to calculate an eighth-grade GPA for each remaining student on the list. Initial conversations with school staff revealed confusion about what would constitute an acceptable GPA. Some thought that GPA means a credit-weighted average on a four-point scale. We were told, for example, that it would not be possible to obtain GPAs for one school because only "grade averages" (on a 100-point scale) were available. Such confusion was easily eliminated by distributing a brief memorandum discussing the calculation of GPAs and other issues pertaining to eligibility.[3]

---

[1]Even if first-day-of-school lists had been more reliable, schools generally were not prepared to produce them because doing so would have interfered with regular school activities.

[2]If an ongoing QOP program were to start delivering services very near the beginning of the school year, the proportion of students selected for QOP who turned out to have transferred to other schools would be much higher than in this demonstration, in which service delivery started almost half way through ninth grade. Also, many (if not most) students new to the school district or coming from middle schools within the district that are not traditionally feeder schools for the QOP high school would effectively be ineligible for QOP. As we discuss later, however, even when lists are constructed several weeks into the school year, many students new to a district are ineligible for QOP because no grades are available for them.

[3]Some school staff were also confused about how to rank students based on grades. One school initially had a separate ranking for each middle school that fed students to the high school. We eliminated the confusion by having

Although it might be more serious if QOP were a permanent rather than a demonstration program, another minor problem was that two schools did not have the resources to calculate GPAs. For one school, QOP staff calculated GPAs from students' eighth-grade transcripts. For the other school, we performed the necessary calculations.[4]

The most serious problem that arose in attempting to calculate GPAs was obtaining eighth-grade transcripts for students who were new to the local public school system after transferring from other school systems or private schools. The typical procedure for calculating GPAs involved two steps. First, district and school staff obtained GPAs for as many students as possible from a computerized database. That database rarely included grades for students new to the system. Second, if the database contained no grades, QOP staff searched a student's paper files for an eighth-grade transcript. If a transcript were available, QOP staff calculated a GPA by hand.[5] More often than not, however, no transcript appeared in a student's file.

For one QOP school, no grades were available in the district's database for nearly 17 percent of students. QOP staff were able to locate an eighth-grade transcript for only 20 percent of those students. So, overall, GPAs could be calculated for just 87 percent of the school's categorically eligible students.[6]

The consequences of this problem were borne by students. Because there was no basis for ranking students for whom a GPA could not be calculated, such students were ineligible for QOP. Thus, potentially many students who were experiencing the difficulties of entering a new school system had no opportunity to enroll in QOP because their transcripts were less mobile then they were.

While problems arose in determining enrollment and calculating GPAs, we should note that in some sites accomplishing both of those tasks seemed more than twice as difficult as accomplishing either one of them. The problem was that information in a school system was dispersed. The QOP school had more accurate enrollment data than the central district office but much less easy access (if any access) to computerized records of grades.[7] Moreover, there was rarely one person who had a good working knowledge of each data source. This problem was made worse by the fact that the most knowledgeable person generally did not have the authority to take direction from a third party (us or the CBO) or to make judgments such as whether a particular special education student should be eligible for QOP. Yet another obstacle was that schools often had little experience in responding

---

*(continued)*

each QOP school send us a list with names and grades for all categorically eligible students. Then, we ranked students and identified the (fully) eligible students, that is, the students in the bottom two-thirds of the grade distribution.

[4]For another school, QOP staff entered GPAs from students' transcripts into a database.

[5]The main difficulty in this case was making sure that the GPA was comparable to other students' GPAs—that it was, for example, on the same scale.

[6]In two other schools, GPAs could be calculated for 88 and 65 percent of categorically eligible students. For the first school, QOP staff had to track down GPAs for about one in six students for whom GPAs could be calculated. For the other school, it was two in five.

[7]For one QOP school, an enrollment list prepared by the central district office missed three-fifths of the students on the school's own enrollment list. At the same time, over one-quarter of the students on the district-prepared list were no longer enrolled according to the school's list. For another school, the differences were less extreme, but still large. The district's list missed one-quarter of the students on the school's list, while about one-sixth of the students on the district's list were not on the school's list.

to information requests such as those that we made. A final obstacle was that despite enthusiasm for QOP and a cooperative spirit on the part of school and district staff, determining which students were eligible for QOP was generally not a high priority. Thus, the resources needed to do the job accurately were not always available.[8]

We discovered many errors in some lists submitted to us and returned the lists to the schools for corrections.[9] Nevertheless, because little information was available for assessing the accuracy of the lists, we are certain that the final lists contained errors, some of which were discovered later in the process of obtaining an evaluation sample. Only by requesting more data and further burdening the schools could the numbers of errors have been determined and reduced substantially.

## INITIAL SAMPLING

In all but two QOP schools, we drew a simple random sample (without replacement) from the list of students eligible for QOP. The selected students were eligible for random assignment if consent was obtained for them to participate in the evaluation. The students who were not selected for the initial sample were not eligible for random assignment and therefore no longer had an opportunity to participate in QOP. We did not draw random samples for two schools because the number of eligible students was less than the target sample size. We conducted sampling independently for each school.

The initial sampling of eligibles had two purposes: (1) to minimize the impact of the evaluation on students and (2) to minimize the burden on QOP staff. Although such concerns about impact and burden arise in every random assignment evaluation, they were heightened in the QOP demonstration because in several of the QOP schools, the number of eligible students was substantially greater than the target size of the evaluation sample (100 in the Ford-funded sites and 200 in all but one of the DOL-funded sites). Thus, there were many extra students who would not be selected for the limited number of QOP slots (50 in the Ford-funded sites and 100 in all but one of the DOL-funded sites) and were not needed to form a control group for the evaluation. Locating those students, telling them and their parents about QOP and the evaluation, and obtaining consent for them to participate in the evaluation would have substantially increased the workload of QOP staff. Moreover, many more students than necessary would have had their hopes raised, only to be disappointed later. Sampling limited the number of disappointed students.

Once we decided to sample eligible students, we had to determine the size of the sample. We wanted to obtain a control group for each school that was the same size as the QOP group, implying a target sample size that was twice the number of available QOP slots. However, if we had

[8]For school staff, the highest priority was running the school. When attention was given to QOP, the highest priority of school and QOP staff was, understandably, serving students. Promoting fairness by ensuring the accuracy of the list of eligible students, most of whom would not be served by QOP, was a lower priority.

[9]The most common errors were excluding students new to the school system and including repeaters. On lists submitted by one site, for example, we discovered that new students had been excluded. We discovered this by observing that not a single student had attended eighth grade in a school outside of the city. For one school, which had grades 9 through 12, we noticed that several students had attended that school the previous year, suggesting that repeaters had been included.

drawn a sample with as many students as the target size of the evaluation sample, we would have had no surplus to allow for students who left the QOP school between development of the school enrollment roster and sampling (because they transferred, dropped out, or were expelled); for students who simply could not be located (or, if located, could not be contacted); and for students for whom consent was denied (explicitly or, by nonresponse, implicitly). Losing those students and dropping below the target size for the evaluation sample because we had no surplus would have reduced the precision of impact estimates. On the other hand, if we had a generous surplus, we would have disappointed more students than necessary and excessively burdened QOP staff.

After weighing these considerations, we drew for each school a sample of eligible students that was 10 percent larger than the target size for the evaluation sample. Accordingly, if a CBO in a DOL-funded site with two QOP schools specified that one school would have 60 QOP slots while the other would have 40, we drew a sample of 132 (= 60 H 2 H 1.1) students for the first school and 88 (= 40 H 2 H 1.1) students for the second school.[10] There were two exceptions to this rule for setting the sample size. First, if (the number of QOP slots H 2 H 1.1) was greater than the number of eligible students in a school, we selected all of the eligible students. Second, last-minute changes in the allocation of QOP slots across the Memphis schools caused minor deviations from the formula.[11]

Our sample size choice was a compromise between the ideal of randomly selecting a sample of eligible students and getting consent for every one of them and the reality that it could not be done. To emphasize the importance of reaching out to every eligible student—regardless of the student's initial interest in QOP—as a fundamental principle of the program, we instructed QOP staff to make every reasonable effort to obtain a completed consent form for each student in the sample. In addition, as we discuss later, we imposed safeguards to ensure that such efforts were undertaken.

## OBTAINING CONSENT

After selection of the initial sample for each school, QOP staff attempted to distribute information packets to each selected student. The packets contained a cover letter from the student's school (usually signed by the principal), a brochure describing the program and the evaluation, and a parental consent form for the evaluation.[12] In addition to collecting completed consent forms, QOP staff were responsible for having students and their parents complete a "locator" form that would provide tracking information to enable us to contact students for follow-up data collection. All but one site chose to include the locator form in the packet with the other materials.

[10]The factor of 2 in the mathematical expressions reflects the fact that we wanted to obtain a control group that was the same size as the QOP group. The QOP group had as many students as there were QOP slots.

[11]To avoid any further delays in enrolling students in QOP, we did not draw a supplemental sample if the 10 percent surplus in the original sample turned out to be too small. Instead, we allowed the control group to be smaller than the QOP group.

[12] Spanish language materials were available.

Although sites varied in how they distributed and collected completed consent and locator forms, a typical approach involved the following four steps: (1) hold an in-school assembly to speak with students and distribute packets; (2) try to find at the school the students who did not attend the assembly; (3) request that students return completed forms to a specified location (usually an office in the school); and (4) follow up with telephone calls and, more often, home visits to meet with parents and obtain completed forms. QOP staff carried out these steps, sometimes with limited assistance from school staff.[13]

The home visits were especially important in obtaining completed forms from as many students in the sample as possible. First, a home visit was the first contact with a nontrivial fraction of students who attended school sporadically. Second, it was often the most reliable means of getting forms delivered to a parent, completed, and returned to QOP staff.

To expedite the process of obtaining consent, all sites offered a nominal incentive, such as movie theater or grocery store gift certificates, for returning completed forms promptly. Nevertheless, obtaining consent was difficult and time-consuming. For the median student, one month elapsed between the time when the student was selected for the sample of students who could receive information packets and the time when we received a completed consent form for that student.[14] For 17 percent of students, more than seven weeks elapsed.

Two of the implementation problems mentioned earlier arose in the process of obtaining consent and explain why the process was so difficult and time-consuming. These problems were (1) contacting students and (2) collecting completed forms.

Every site encountered difficulties in locating and contacting a substantial fraction of students. The main reason was that the students' families moved frequently, which was an explanation noted earlier for why schools had trouble in determining their current enrollment. For some of these students, QOP staff learned that after the school constructed the enrollment list used for identifying eligibles and drawing the initial sample, the students quit attending the QOP school, often because they had moved and transferred to another school. For students still thought to be living nearby and enrolled in the QOP school, QOP staff often discovered that the contact information contained in school records was badly out of date. Sometimes, the information was current but inaccurate, referring, for example, to a nonexistent address. Using various means, such as talking with a student's friends, QOP staff were often able to determine where a student lived. However, it was still difficult to contact some students' families because there was no telephone in the home, no adult was at home much of the time, or a convenient meeting time could not be arranged.

Problems did not end when contact was made with a student. An information packet given to a student often was not delivered to the student's parents, and sometimes completed forms were not

[13]The Yakima site deviated most dramatically from the approach outlined. Confidentiality restrictions severely limited the role of QOP staff until parental consent was obtained. Therefore, school staff were responsible for locating students, distributing materials, and collecting completed consent forms.

[14]This figure overstates the time required for a site to obtain a completed form. First, a day or two—sometimes more—elapsed between sample selection and the first attempt to contact a student. Second, a site typically waited until it had received completed forms for several students before shipping the forms to us. Therefore, some forms may have been in a site's possession for a few days before being shipped. Even considering these two factors and the time required for shipping, we figure that it took, on average, two to three weeks to contact a student and collect a completed consent form.

returned to school. In other instances, parents did not read the materials or complete the forms. Sometimes, the seeming lack of reliability was attributable, in fact, to an initial lack of interest in QOP, concern about the time commitment required, or suspicions about government programs. QOP staff discussed these issues at length with students and parents. To address concerns about time commitments, for example, QOP staff explained that students were not obligated to participate in QOP if selected and could refuse to answer survey questions or take evaluation achievement tests.

Generally, when less intrusive approaches had failed in getting forms completed, the most effective strategy seemed to be for QOP staff to visit parents in the students' homes and wait there while the parents completed the forms. In contrast, telephone calls to parents achieved only limited success when previous contact with the student alone had failed.

The only other problem in obtaining completed forms pertained to how they were completed—specifically, ensuring that the consent form was properly marked and signed and that the most important items on the locator form were provided. Although about 40 percent of locator forms (and 1 percent of consent forms) had deficiencies and were returned to sites, correcting the deficiencies was usually straightforward and caused only minor delays in random assignment.

## RANDOM ASSIGNMENT

After three to four months of developing a list of eligibles and obtaining completed consent and locator forms for students, the final activities required to complete random assignment took about one day. The main activities were a series of checks designed to ensure that random assignment was conducted properly and fairly.

To be eligible for random assignment, a student had to (1) be eligible for QOP (some students were found to be ineligible after selection of a school's initial sample), (2) have parental permission to participate in the evaluation, and (3) have a completed locator form. Before we proceeded to random assignment of the eligible students to QOP and control groups, we required QOP coordinators to:

- Verify that the list of students eligible for random assignment was accurate.
- Verify the planned allocation of QOP slots across schools (if there was more than one school).
- Verify that QOP staff had made good-faith efforts to locate, contact, and obtain completed forms for students who were not eligible for random assignment.

Typically, the last verification involved a student-by-student review of the actions taken by QOP staff and the outcome (e.g., QOP staff discovered that the student moved to another state three months earlier). Sites had to establish that parental permission and a completed locator form were highly unlikely to be forthcoming in the near future.

After the verifications were completed, we randomly assigned students eligible for random assignment to QOP and control groups. One student was assigned to each available QOP slot regardless of how many students were eligible for random assignment. We conducted random assignment independently for each school.

After completing random assignment for a site, we sent the QOP coordinator the list of QOP-group students and the list of control-group students. QOP staff were responsible for notifying all students about the outcome of random assignment. To maintain the integrity of random assignment, we imposed two rules: (1) a student in the control group could not participate in QOP and (2) a student who was not eligible for random assignment could not participate in QOP. To our knowledge based on several monitoring activities, these rules were not violated.

## SCHOOL-BY-SCHOOL SUMMARY OF SAMPLE DEVELOPMENT

Table A.1 shows how the evaluation sample was developed for each school. The first row shows the number of slots allocated to each school. The second row in the table—headed "GPA Eligibles"—shows the number of students in each school who were attending the school, were entering ninth grade for the first time, were appropriate for QOP in accordance with applicable laws and regulations, and were in the bottom two-thirds of the grade distribution based on grades from the eighth grade (among students satisfying the first three criteria). The number of eligible students ranged from 82 to 523 across the QOP schools. Using the procedures described in detail earlier, we selected from the list of GPA Eligibles an "Initial Sample" consisting of the number of students shown in the third row. Then, we instructed QOP staff to obtain consent for participation in the evaluation for all students in the initial sample.

As discussed in the main text, about five percent of the students in the initial sample—the students in the row headed "Ineligibles"—were determined to be ineligible for QOP based, in most instances, on evidence from school records indicating that a student had never attended the QOP school or had left the school early in the school year before QOP eligibility was determined. The parents/guardians of about another seven percent of the students in the initial sample never responded to QOP staff's attempts to obtain consent. As we noted before, there was strongly suggestive evidence from school staff or other sources—but not definitive evidence from school records—that many of these students were, in fact, ineligible. However, in some instances, the failure to respond probably was a passive denial of consent. Parents/guardians actively denied consent for another two percent of the initial QOP sample. Before we would conduct random assignment for a school, QOP staff had to verify that they had made substantial efforts to contact and obtain consent from the nonrespondents.[15]

The "Consenters" row in Table A.1 gives the number of students who were eligible for random assignment and therefore constitute our evaluation sample. From among these students, we filled the available QOP slots independently for each school by simple random sampling without

[15] The nonresponse and active denial of consent percentages are the same when the base for the percentages is the number of students in the "Net Eligible Sample" rather than the initial sample.

replacement. Students who were selected for QOP became QOP enrollees. Students who were not selected for QOP became the control group.[16]

[16]One seemingly minor limitation of the group of consenters as a representative sample of the population of students who satisfy the QOP eligibility criteria is that a few implicit and explicit denials of consent might not have occurred in the absence of the evaluation. However, it seems unlikely that more than a trivial number of students would have accepted a 100 percent chance to participate in QOP but rejected a 50 percent chance that was essentially costless.

TABLE A.1

DEVELOPMENT OF THE EVALUATION SAMPLE

| | Cleveland | Washington, D.C. | | | Fort Worth | Houston | | | Memphis | | | | Philadelphia | Yakima | All Sites |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Collinwood | Anacostia | Eastern | Total | Paschal | Austin | Yates | Total | Carver | Hamilton | Hillcrest | Total | Franklin | Davis | Total |
| QOP Slots | 100 | 40 | 40 | 80 | 100 | 50 | 50 | 100 | 35 | 27 | 38 | 100 | 50 | 50 | 580 |
| GPA Eligibles | 175 | 130 | 165 | 295 | 398 | 523 | 305 | 828 | 82 | 225 | 108 | 415 | 210 | 229 | 2550 |
| Initial Sample | 175 | 88 | 88 | 176 | 220 | 110 | 110 | 220 | 82 | 58 | 88 | 228 | 110 | 110 | 1239 |
| – Ineligibles | 9 | 11 | 4 | 15 | 18 | 5 | 7 | 12 | 0 | 0 | 1 | 1 | 9 | 0 | 64 |
| Net Eligible Sample | 166 | 77 | 84 | 161 | 202 | 105 | 103 | 208 | 82 | 58 | 87 | 227 | 101 | 110 | 1175 |
| Consenters | 158 | 72 | 82 | 154 | 177 | 92 | 94 | 186 | 70 | 54 | 75 | 199 | 95 | 100 | 1069 |
| Denied Consent | 1 | 1 | 0 | 1 | 8 | 5 | 4 | 9 | 0 | 0 | 3 | 3 | 2 | 0 | 24 |
| Did Not Respond | 7 | 4 | 2 | 6 | 17 | 8 | 5 | 13 | 12 | 4 | 9 | 25 | 4 | 10 | 82 |
| Consent Probability[a] | 95 | 94 | 98 | 96 | 88 | 88 | 91 | 89 | 85 | 93 | 86 | 88 | 94 | 91 | 91 |
| QOP Enrollees | 100 | 40 | 40 | 80 | 100 | 50 | 50 | 100 | 35 | 27 | 38 | 100 | 50 | 50 | 580 |
| Controls | 58 | 32 | 42 | 74 | 77 | 42 | 44 | 86 | 35 | 27 | 37 | 99 | 45 | 50 | 489 |
| QOP Probability[b] | 63 | 56 | 49 | 52 | 56 | 54 | 53 | 54 | 50 | 50 | 51 | 50 | 53 | 50 | 54 |

[a]100 × Consenters / Net Eligible Sample

[b]100 × QOP Enrollees / Consenters

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# APPENDIX B

## THE BASELINE DATA

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

Baseline data represent sample members' characteristics that were unaffected by QOP, either because they were determined prior to the demonstration or because—like age—they cannot be affected by a social program. We used baseline characteristics to:

- Correct for nonresponse bias in the impact estimates (Appendix E).
- Correct for random differences between the QOP group and the control group (Appendix F).
- Estimate impacts on subgroups of enrollees (Chapter VII).

Using data that are unaffected by QOP is necessary for each of these procedures to produce unbiased results.

In this appendix, we describe the sources of our baseline data. Then, we examine the prevalence of missing values, and discuss the methods used to impute for missing values.

## DATA SOURCES FOR THE BASELINE DATABASE

The baseline database contains information on sex, date of birth, race, ethnicity (Hispanic origin), and eighth-grade grade point average (GPA). Because DOL elected not to conduct a baseline survey, data on these characteristics were collected from four other sources: (1) the database used to determine eligibility for QOP; (2) the telephone survey administered during the fall and winter of the fifth year after sample members entered the ninth grade; (3) high school transcripts; and (4) QOP case managers. The eligibility database included eighth-grade GPA and the name of the school attended at the beginning of ninth grade. It also often included date of birth, and for some schools, it included sex, race, or ethnicity.

## DEVELOPMENT OF THE BASELINE DATABASE

To develop the baseline database, we used the four data sources hierarchically in the order listed above. If a value needed for the baseline database was available from the eligibility database, no other sources were consulted. Thus, the final source, QOP case managers, was used only when the value was not available from the first three sources. Table B.1 displays the proportion of sample members who were missing baseline data items from both the eligibility files and the telephone survey.

TABLE B.1

MISSING DATA RATES FOR BASELINE ITEMS IN THE ELIGIBILITY DATABASE AND TELEPHONE SURVEY, BY QOP/CONTROL STATUS AND SCHOOL
(Percentages)

| | Fort Worth | Cleveland | Washington, D.C. | | Houston | | Memphis | | | Philadelphia | Yakima | All Sites |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Paschal | Collinwood | Eastern | Anacostia | Yates | Austin | Hillcrest | Hamilton | Carver | Franklin | Davis | Total |
| Sex | | | | | | | | | | | | |
| Overall | 16 | 14 | 15 | 31 | 19 | 5 | 15 | 24 | 16 | 18 | 17 | 17 |
| QOP | 15 | 14 | 5 | 15 | 12 | 6 | 8 | 26 | 11 | 16 | 18 | 13 |
| Control | 18 | 14 | 24 | 50 | 27 | 5 | 22 | 22 | 20 | 20 | 16 | 20 |
| Ethnicity | | | | | | | | | | | | |
| Overall | 16 | 16 | 16 | 32 | 23 | 5 | 15 | 24 | 17 | 20 | 19 | 18 |
| QOP | 15 | 14 | 8 | 18 | 18 | 6 | 8 | 26 | 11 | 16 | 22 | 14 |
| Control | 18 | 19 | 24 | 50 | 30 | 5 | 22 | 22 | 23 | 24 | 16 | 22 |
| Race | | | | | | | | | | | | |
| Overall | 59 | 14 | 15 | 31 | 20 | 70 | 15 | 26 | 16 | 20 | 60 | 34 |
| QOP | 57 | 14 | 5 | 15 | 14 | 64 | 8 | 30 | 11 | 16 | 62 | 30 |
| Control | 62 | 14 | 24 | 50 | 27 | 76 | 22 | 22 | 20 | 24 | 58 | 38 |
| Date of Birth | | | | | | | | | | | | |
| Overall | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| QOP | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| Control | 0 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Eighth grade GPA | | | | | | | | | | | | |
| Overall | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| QOP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Control | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

SOURCE: Eligibility database and telephone survey.

Information regarding GPA in eighth grade and school attended was complete for all sample members because these items were required to determine eligibility. Missing data rates were nearly as low for date of birth—one percent for both the QOP and control groups. The telephone survey was the main source of data on sex, ethnicity, and race. The missing data rates for these three characteristics were higher than for the other items: 17 to 18 percent for sex and ethnicity and 34 percent for race for the seven sites combined. Almost all of the students for whom data on sex and ethnicity were missing had not completed the survey at all, usually because the student was not located. This was also an important reason why data on race were missing. In addition, we found that, for schools with relatively many Hispanic students, students who reported Hispanic ethnicity often did not respond to the question on race. The missing data rates for race for Paschal, Austin, and Davis were 59, 70, and 60 percent, respectively. The highest missing data rate at one of the other eight schools was 31 percent.

Table B.2 displays the missing data rates for the items in the baseline database after using school transcripts and using the youth's first name to impute sex. After these steps, there were no missing values for sex, and only five missing values for date of birth. The overall missing data rate for ethnicity was 15 percent, down from 18 percent, and the overall missing data rate for race was 26 percent, down from 34 percent.

## STATISTICAL IMPUTATION FOR MISSING VALUES

We imputed for the remaining missing values using a sequential hot deck procedure (Carlson et al. 1995). For a given data item, students in the evaluation sample were classified as donors and imputees based on whether information on that particular data item was available (donor) or not (imputee). The objective of hot deck imputation was to impute a value from a donor to an imputee. To achieve this objective, we categorized students into homogeneous classes, using variables thought to be strongly associated with the data item being imputed. For example, because different schools might have different age distributions as a result of student performance and school policies, each QOP school was a separate imputation class for imputing date of birth.

Because the ethnicity of an individual student is strongly associated with the ethnic composition of the student's school and the origin of the student's surname, we imputed ethnicity by assigning students to 22 imputation classes formed by cross-classifying the 11 schools and an indicator for whether the student had a Spanish surname. Additionally, for better control over the imputations, we sorted the students within imputation classes by an indicator for being over age 14 when entering ninth grade and by eighth-grade GPA. Thus, the students adjacent to one another in the sorted data file were similar with respect to these variables.[1] Finally, we performed imputations by donating to an imputee a nonmissing value from the previous student or the subsequent student (in an

[1] Serpentine sorting was used to ensure that adjacent students were as similar as possible. With serpentine sorting, the sort order is reversed as boundaries are crossed for higher level sorting variables. For example, suppose two variables, age and GPA, are used for sorting. With conventional sorting, the resulting sort order is such that while most adjacent students differ by only one level of the GPA variable, when the age variable changes values, the students on either side of this boundary differ by only one level of the age variable, but their values for the GPA variable are as different as they can be. With serpentine sorting, when the age variable changes values, the GPA variable goes in reverse order from before, so that the students on either side of the age boundary differ by only the age variable and have identical (or nearly identical) values for the GPA variable.

TABLE B.2

MISSING DATA RATES FOR BASELINE ITEMS AFTER OBTAINING SOME DATA FROM TRANSCRIPTS AND USING FIRST NAMES TO IMPUTE SEX, BY QOP/CONTROL STATUS AND SCHOOL
(Percentages)

| | Fort Worth | Cleveland | Washington, D.C. | | Houston | | | Memphis | | Philadelphia | Yakima | All Sites |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Paschal | Collinwood | Eastern | Anacostia | Yates | Austin | Hillcrest | Hamilton | Carver | Franklin | Davis | Total |
| Sex | | | | | | | | | | | | |
| Overall | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| QOP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Control | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ethnicity | | | | | | | | | | | | |
| Overall | 12 | 16 | 16 | 32 | 21 | 0 | 12 | 20 | 13 | 17 | 16 | 15 |
| QOP | 9 | 14 | 8 | 18 | 16 | 0 | 3 | 19 | 3 | 10 | 16 | 11 |
| Control | 17 | 19 | 24 | 50 | 27 | 0 | 22 | 22 | 23 | 24 | 16 | 21 |
| Race | | | | | | | | | | | | |
| Overall | 53 | 1 | 12 | 25 | 3 | 67 | 7 | 15 | 11 | 9 | 56 | 26 |
| QOP | 48 | 2 | 0 | 5 | 4 | 62 | 3 | 15 | 3 | 4 | 54 | 21 |
| Control | 58 | 0 | 24 | 50 | 2 | 74 | 11 | 15 | 20 | 16 | 58 | 31 |
| Date of Birth | | | | | | | | | | | | |
| Overall | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| QOP | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Control | 0 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Eighth grade GPA | | | | | | | | | | | | |
| Overall | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| QOP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Control | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

SOURCE: Eligibility database, telephone survey, and transcripts.

alternating manner). We combined the QOP-group and control-group members to perform the imputations. Table B.3 displays the number of students available as donors and the number of students requiring imputation of Hispanic ethnicity in each of the 22 classes.

To impute race, we assigned students to 22 classes, formed by cross-classifying the 11 schools and an indicator for whether the youth was of Hispanic ethnicity (as reported or imputed). Within each class, youth were sorted by an indicator for being over age 14 when entering ninth grade and by eighth-grade GPA. Table B.4 displays the number of students available as donors and the number of students requiring imputation of race in each of the 22 classes. Because Yates and Hamilton had no Hispanic donors, the race imputation was modified for these two schools by eliminating from the imputation process the classification based on ethnicity. Thus, for Yates and Hamilton, there were only two classes (one for each school), and within each class, sample members were sorted by the age indicator and eighth-grade GPA. Table B.5 presents the frequency distribution of the number of times a given donor was used by data item.

TABLE B.3

NUMBER OF DONORS AND IMPUTEES FOR ETHNICITY, BY SPANISH SURNAME AND SCHOOL

| | Fort Worth | Cleveland | Washington, D.C. | | Houston | | Memphis | | | Philadelphia | Yakima | All Sites |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Paschal | Collinwood | Eastern | Anacostia | Yates | Austin | Hillcrest | Hamilton | Carver | Franklin | Davis | Total |
| Total | | | | | | | | | | | | |
| Overall | 177 | 158 | 82 | 72 | 94 | 92 | 75 | 54 | 70 | 95 | 100 | 1,069 |
| Donors | 155 | 133 | 69 | 49 | 74 | 92 | 66 | 43 | 61 | 79 | 84 | 905 |
| Imputees | 22 | 25 | 13 | 23 | 20 | 0 | 9 | 11 | 9 | 16 | 16 | 164 |
| Spanish surname | | | | | | | | | | | | |
| Overall | 105 | 0 | 0 | 1 | 2 | 83 | 0 | 0 | 1 | 1 | 57 | 250 |
| Donors | 93 | 0 | 0 | 1 | 2 | 83 | 0 | 0 | 1 | 1 | 47 | 228 |
| Imputees | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 22 |
| Non-Spanish surname | | | | | | | | | | | | |
| Overall | 72 | 158 | 82 | 71 | 92 | 9 | 75 | 54 | 69 | 94 | 43 | 819 |
| Donors | 62 | 133 | 69 | 48 | 72 | 9 | 66 | 43 | 60 | 78 | 37 | 677 |
| Imputees | 10 | 25 | 13 | 23 | 20 | 0 | 9 | 11 | 9 | 16 | 6 | 142 |

SOURCE: Eligibility database, telephone survey, and transcripts.

TABLE B.4

NUMBER OF DONORS AND IMPUTEES FOR RACE, BY ETHNICITY AND SCHOOL

| | Fort Worth | Cleveland | Washington, D.C. | | Houston | | Memphis | | | Philadelphia | Yakima | All Sites |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Paschal | Collinwood | Eastern | Anacostia | Yates | Austin | Hillcrest | Hamilton | Carver | Franklin | Davis | Total |
| Total | | | | | | | | | | | | |
| Overall | 177 | 158 | 82 | 72 | 94 | 92 | 75 | 54 | 70 | 95 | 100 | 1,069 |
| Hispanic | | | | | | | | | | | | |
| Overall | 115 | 1 | 0 | 2 | 3 | 90 | 0 | 1 | 0 | 3 | 62 | 277 |
| Donors | 26 | 1 | 0 | 2 | 0 | 28 | 0 | 0 | 0 | 2 | 11 | 70 |
| Imputees | 89 | 0 | 0 | 0 | 3 | 62 | 0 | 1 | 0 | 1 | 51 | 207 |
| Non-Hispanic | | | | | | | | | | | | |
| Overall | 62 | 157 | 82 | 70 | 91 | 2 | 75 | 53 | 70 | 92 | 38 | 792 |
| Donors | 58 | 155 | 72 | 52 | 91 | 2 | 70 | 46 | 62 | 84 | 33 | 725 |
| Imputees | 4 | 2 | 10 | 18 | 0 | 0 | 5 | 7 | 8 | 8 | 5 | 67 |

SOURCE: Eligibility database, telephone survey, and transcripts.

TABLE B.5

NUMBER OF DONORS BY THE NUMBER OF TIMES USED, BY DATA ITEM

| Number of Times Used | Data Item | | |
|---|---|---|---|
| | Date of Birth | Ethnicity | Race |
| 1 | 4 | 114 | 66 |
| 2 | | 19 | 18 |
| 3 | | 4 | 5 |
| 4 | | | 4 |
| 5 | | | 3 |
| 6 | | | 8 |
| 7 | | | 2 |
| 8 | | | 3 |
| 9 | | | 2 |
| 10 | | | 1 |
| 11 | | | 0 |
| 12 | | | 1 |

SOURCE: Eligibility database, telephone survey, and transcripts.

# APPENDIX C

# FOLLOW-UP DATA

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

Data on outcomes were obtained from:

1. An in-person survey administered during the spring of the fourth year after sample members entered the ninth grade.
2. Achievement tests in mathematics and reading administered immediately before the in-person survey.
3. A telephone survey administered during the fall and the winter of the fifth year after sample members entered the ninth grade.
4. High school transcripts from all the high schools the sample members attended during the demonstration.

In this appendix, we describe the instruments and fielding procedures for the in-person survey, the achievement tests, the telephone survey, and the collection of transcripts. Then, after discussing the response rates to the surveys, achievement tests, and transcripts, we examine the prevalence of missing values for outcomes, that is, item nonresponse.

## INSTRUMENTS AND FIELDING PROCEDURES

Table C.1 lists the sites and schools that participated in the QOP demonstration. Table C.2 presents the dates within which each survey was conducted. The program in the Washington, D.C., site started one year later than the other programs; hence, data collection activities in this site occurred one year later than in the other sites.

### The In-Person Survey and Achievement Tests

The achievement tests are presented in Exhibit C.1, and the in-person survey questionnaire that was used in all sites except Washington, D.C., is displayed in Exhibit C.2. The questionnaire that was used in the Washington, D.C., site was identical to the questionnaire that was used in the other sites except for the date and year references in some questions.

Four MPR staff traveled to each site to administer the survey and tests. Based on previous telephone calls to locate each sample member, sample members who were still enrolled at the QOP schools were assigned to in-school sessions, whereas sample members who had transferred or dropped out were assigned to sessions outside of the QOP schools. The sessions outside of QOP schools were held at conveniently located private schools, universities, public facilities with meeting spaces, and, in one instance, a church social hall.

Before the sessions, MPR sent parents or guardians of sample members a letter describing the purpose of the study and encouraging their child's participation. In addition, the letter informed them about the sensitive nature of the survey questions. Sample members were called approximately one week before the session and asked to attend. In addition, they received a reminder call either the night before or the morning of their assigned session.

TABLE C.1

QOP SITES AND SCHOOLS

| QOP Site | Schools |
|---|---|
| Fort Worth, TX | Paschal High School |
| Cleveland, OH | Collinwood High School |
| Washington, DC | Anacostia High School<br>Eastern High School |
| Houston, TX | Austin High School<br>Yates High School |
| Memphis, TN | Carver High School<br>Hamilton High School<br>Hillcrest High School |
| Philadelphia, PA | Ben Franklin High School |
| Yakima, WA | Davis High School |

TABLE C.2

DATA COLLECTION FIELDING DATES

| Instrument | Fielding Dates |
|---|---|
| Non-DC In-Person Survey/Achievement Tests | February - April 1999 |
| DC In-Person Survey/Achievement Tests | April 2000 |
| Non-DC Telephone Survey | November 1999 - June 2000 |
| DC Telephone Survey | November 2000 - April 2001 |
| Non-DC School Records | September 1999 - December 2000 |
| DC School Records | December 2000 - April 2001 |

The achievement tests were administered before the survey. These tests were developed by the Educational Testing Service (ETS) from National Education Longitudinal Study (NELS) achievement tests. ETS developed the NELS tests and administered them to a national probability sample of tenth graders in 1990. ETS used the national data to place each QOP evaluation sample member within the national distributions of reading and mathematics scores. The position in one of these distributions is expressed as a percentile. For example, a QOP evaluation sample member at the 47$^{th}$ percentile had a test score that was higher than 47 percent of the national population of tenth graders. NELS is a survey program of the National Center for Educational Statistics (NCES) of the U.S. Department of Education that follows a representative cohort of students from the eighth grade through their teenage years into early adulthood. NELS includes achievement tests in reading, mathematics, and other subjects. The QOP achievement tests contained a subset of the questions in the NELS tests.

We administered four timed tests for the QOP evaluation. First, sample members completed a Phase I mathematics test. When they were finished, they returned it to the session proctors and were given a Phase I reading test. The proctors scored the Phase I mathematics test while the Phase I reading test was under way. Based on their score on the Phase I mathematics test, sample members were given a low-, medium-, or high-level Phase II mathematics test. The Phase I reading test was scored while the Phase II mathematics test was under way. Based on their score on the Phase I reading test, sample members were given a low-, medium-, or high-level Phase II reading test.

The sample members were given a 5 to 10 minute break after the tests. At the end of the break, the proctors gave a questionnaire and a plain brown envelope to each sample member. The sample members were instructed to complete the questionnaire and seal it in the envelope before returning it to the proctors. In addition, each sample member was asked to read and sign a consent form giving permission for MPR to collect his or her school records. At the end of the session, each sample member was given a $30 check. Pizza and sodas were also provided.

Survey staff interviewed individually the sample members who did not participate in a group session. Overall, 62 percent of the sample members who completed the tests and survey did so in a group session and the remaining 38 percent did so during field follow-up.

**The Telephone Survey**

We conducted a telephone survey with each sample member 7 to 10 months after the in-person survey and achievement tests. Interviews were administered using computer-assisted telephone interviewing (CATI) and took about 20 minutes to complete. Exhibit C.3 presents the questionnaire.

Each sample member received a letter about one week before the start of interviewing. The letter indicated that we would call for an important follow-up study and encouraged him or her to participate. In addition, the letter indicated that we would pay $10 for completing the interview.

We interviewed in person those who did not respond to the telephone survey. The same field interviewers used in the in-person individual interviews followed up with nonrespondents to the telephone survey. Overall, 92 percent of the sample members who responded did so via telephone and the remaining 8 percent responded during in-person follow-up.

### School Transcript Collection

The last data collection activity completed to date involved collecting and processing transcripts from all high schools the sample members attended since the beginning of the demonstration. In the telephone survey, sample members identified 194 schools—the 11 QOP schools and 183 schools to which the youth had transferred. From those schools, we requested 1,487 transcripts. In addition to the transcripts, schools were asked to provide a course list or course catalog and a description of the school's grading system.

Each school was mailed a request packet (Exhibit C.4) that included the following items: a cover letter explaining the purpose of the study; a checklist of instructions for providing the transcripts and associated information; forms for identifying the youth and recording their information; copies of the youths' signed consent forms; disclosure notices to be placed in the youths' files indicating the purpose for which the school records were released; a form to request reimbursement for transcript preparation; and an addressed, postage-paid envelope for returning the materials. We remailed the packet to the schools that did not respond to the initial request within three weeks. We also telephoned such schools a few days later. A third nonrespondent mailing was conducted three weeks after the second mailing. Telephone follow-up with nonresponding schools continued throughout the transcript collection.

## RESPONSE RATES

Table C.3 displays the unit response rates for each data collection activity. The figures are presented separately for QOP- and control-group members and are presented for the full sample and by school.

### The In-Person Survey and Achievement Tests

The overall response rate to the in-person survey was 84 percent. The difference in response rates between the QOP and control groups was 8 percentage points overall (88 percent for the QOP group and 80 percent for the control group). However, as shown in Table C.3, this differential varied widely across schools. The largest differences in response rates between the QOP and control groups were for Yates (17 percentage points) and Hillcrest (14 percentage points).

Only a few youth completed the in-person survey but not the achievement tests or vice versa. Thus, the response rates to the achievement tests were very close to those of the in-person survey. For the reading achievement test, the overall response rate was 84 percent (88 percent for the QOP group and 80 percent for the control group). For the mathematics achievement test, the overall response rate was 84 percent (87 percent for the QOP group and 80 percent for the control group).

TABLE C.3

RESPONSE RATES FOR DATA COLLECTION ACTIVITIES
(Percentages, except for sample sizes)

| | Fort Worth | Cleveland | Washington, D.C. | | | Houston | | | Memphis | | | | Philadelphia | Yakima | All Sites |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Paschal | Collinwood | Eastern | Anacostia | Total | Yates | Austin | Total | Hillcrest | Hamilton | Carver | Total | Franklin | Davis | Total |
| Sample size | | | | | | | | | | | | | | | |
| Overall | 177 | 158 | 82 | 72 | 154 | 94 | 92 | 186 | 75 | 54 | 70 | 199 | 95 | 100 | 1069 |
| QOP | 100 | 100 | 40 | 40 | 80 | 50 | 50 | 100 | 38 | 27 | 35 | 100 | 50 | 50 | 580 |
| Control | 77 | 58 | 42 | 32 | 74 | 44 | 42 | 86 | 37 | 27 | 35 | 99 | 45 | 50 | 489 |
| In-person survey | | | | | | | | | | | | | | | |
| Overall | 83 | 82 | 87 | 82 | 84 | 82 | 93 | 88 | 85 | 80 | 86 | 84 | 89 | 76 | 84 |
| QOP | 88 | 84 | 92 | 88 | 90 | 90 | 94 | 92 | 92 | 78 | 83 | 85 | 92 | 82 | 88 |
| Control | 77 | 79 | 81 | 75 | 78 | 73 | 93 | 83 | 78 | 81 | 89 | 83 | 87 | 70 | 80 |
| Achievement tests | | | | | | | | | | | | | | | |
| Reading | | | | | | | | | | | | | | | |
| Overall | 82 | 83 | 85 | 82 | 84 | 82 | 96 | 89 | 85 | 80 | 86 | 84 | 89 | 75 | 84 |
| QOP | 87 | 85 | 92 | 88 | 90 | 90 | 96 | 93 | 92 | 78 | 83 | 85 | 92 | 80 | 88 |
| Control | 77 | 79 | 79 | 75 | 77 | 73 | 95 | 84 | 78 | 81 | 89 | 83 | 87 | 70 | 80 |
| Mathematics | | | | | | | | | | | | | | | |
| Overall | 81 | 83 | 85 | 82 | 84 | 82 | 96 | 89 | 85 | 80 | 86 | 84 | 89 | 75 | 84 |
| QOP | 86 | 85 | 92 | 88 | 90 | 90 | 96 | 93 | 92 | 78 | 83 | 85 | 92 | 80 | 87 |
| Control | 75 | 79 | 79 | 75 | 77 | 73 | 95 | 84 | 78 | 81 | 89 | 83 | 87 | 70 | 80 |
| Telephone survey | | | | | | | | | | | | | | | |
| Overall | 84 | 86 | 85 | 69 | 78 | 81 | 95 | 88 | 85 | 76 | 84 | 82 | 82 | 83 | 83 |
| QOP | 85 | 86 | 95 | 85 | 90 | 88 | 94 | 91 | 92 | 74 | 89 | 86 | 84 | 82 | 87 |
| Control | 82 | 86 | 76 | 50 | 65 | 73 | 95 | 84 | 78 | 78 | 80 | 79 | 80 | 84 | 80 |
| Transcripts | | | | | | | | | | | | | | | |
| Overall | 87 | 70 | 93 | 85 | 89 | 83 | 96 | 89 | 83 | 63 | 83 | 77 | 79 | 79 | 82 |
| QOP | 93 | 68 | 98 | 92 | 95 | 92 | 98 | 95 | 87 | 67 | 86 | 81 | 82 | 88 | 86 |
| Control | 79 | 72 | 88 | 75 | 82 | 73 | 93 | 83 | 78 | 59 | 80 | 74 | 76 | 70 | 77 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

There were several reasons for nonresponse to the in-person survey and achievement tests, and they were about equally important. Some sample members were not located or refused to answer the survey. Others could not be contacted for an interview or did not meet with the field interviewer when scheduled, and some had moved out of the survey area. Table C.4 displays the final disposition report for the in-person survey and achievement tests. This report shows, for example, how many youth responded and, by reason for nonresponse, how many did not respond.

### The Telephone Survey

The overall response rate to the telephone survey was 83 percent. The difference in response rates between the QOP and control groups was 7 percentage points overall (87 percent for the QOP group and 80 percent for the control group). As with the in-person survey and achievement tests, this differential varied widely across schools. The largest differences in response rates between the QOP and control groups were for Anacostia (35 percentage points), Eastern (19 percentage points), Yates (15 percentage points), and Hillcrest (14 percentage points).

Most nonrespondents to the telephone survey were youth who could not be located. Table C.5 displays the final disposition report for the telephone survey.

### School Transcripts

The response rate to the school transcripts data collection was 82 percent. The difference in response rates between the QOP and control groups was 9 percentage points (86 percent for the QOP group and 77 percent for the control group). Among schools, the largest difference in response rates between the QOP and control groups was for Davis (18 percentage points).

We collected complete academic records—all courses and grades from the beginning of ninth grade until the end of high school (by graduation or not)—for 74 percent of the youth, and we obtained no transcript at all for 18 percent. For the remaining 8 percent, we obtained incomplete transcript data. For most of these cases, youth attended multiple schools, but we received transcripts from only some of the schools attended.

---

## MISSING VALUES

---

Item nonresponse was uncommon for most outcome measures used in the impact analysis (see Table C.6). For example, item nonresponse was typically less than one percent for indicators of high school completion, postsecondary activities, and childbearing. Item nonresponse for indicators of substance abuse and criminal activity was slightly higher, but remained under four percent. In general, item nonresponse did not differ much between the QOP and control groups.

TABLE C.4

IN-PERSON SURVEY AND ACHIEVEMENT TESTS DISPOSITIONS, BY SITE AND QOP/CONTROL STATUS
(Numbers of respondents and percentages)

| | Fort Worth | | | Cleveland | | | Washington, D.C. | | | Houston | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Disposition | Total N=177 | QOP N=100 | Control N=77 | Total N=158 | QOP N=100 | Control N=58 | Total N=154 | QOP N=80 | Control N=74 | Total N=186 | QOP N=100 | Control N=86 |
| Completed | | | | | | | | | | | | |
| Total | 147 | 88 | 59 | 131 | 85 | 46 | 130 | 72 | 58 | 165 | 93 | 72 |
| | (83%) | (88%) | (77%) | (83%) | (85%) | (79%) | (84%) | (90%) | (78%) | (89%) | (93%) | (84%) |
| Group | 85 | 59 | 26 | 74 | 50 | 24 | 64 | 41 | 23 | 90 | 55 | 35 |
| | (48%) | (59%) | (34%) | (47%) | (50%) | (41%) | (42%) | (51%) | (31%) | (48%) | (55%) | (41%) |
| Field | 59 | 26 | 33 | 56 | 34 | 22 | 66 | 31 | 35 | 73 | 37 | 36 |
| | (33%) | (26%) | (43) | (35%) | (34%) | (38%) | (43%) | (39%) | (47%) | (39%) | (37%) | (42%) |
| Partial | 3 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 1 |
| | (2%) | (3%) | (0%) | (1%) | (1%) | (0%) | (0%) | (0%) | (0%) | (1%) | (1%) | (1%) |
| Completed, by Instrument | | | | | | | | | | | | |
| Survey | 147 | 88 | 59 | 130 | 84 | 46 | 127 | 70 | 57 | 163 | 92 | 71 |
| | (83%) | (88%) | (77%) | (82%) | (84%) | (79%) | (82%) | (88%) | (77%) | (88%) | (92%) | (83%) |
| Reading Phase I | 146 | 87 | 59 | 131 | 85 | 46 | 129 | 72 | 57 | 165 | 93 | 72 |
| | (82%) | (87%) | (77%) | (83%) | (85%) | (79%) | (84%) | (90%) | (77%) | (89%) | (93%) | (84%) |
| Reading Phase II | 145 | 86 | 59 | 130 | 84 | 46 | 129 | 72 | 57 | 165 | 93 | 72 |
| | (82%) | (86%) | (77%) | (82%) | (84%) | (79%) | (84%) | (90%) | (77%) | (89%) | (93%) | (84%) |
| Math Phase I | 145 | 86 | 59 | 131 | 85 | 46 | 129 | 72 | 57 | 165 | 93 | 72 |
| | (82%) | (86%) | (77%) | (83%) | (85%) | (79%) | (84%) | (90%) | (77%) | (89%) | (93%) | (84%) |
| Math Phase II | 144 | 85 | 59 | 130 | 84 | 46 | 129 | 72 | 57 | 165 | 93 | 72 |
| | (81%) | (85%) | (77%) | (82%) | (84%) | (79%) | (84%) | (90%) | (77%) | (89%) | (93%) | (84%) |
| Not Completed | | | | | | | | | | | | |
| Total | 30 | 12 | 18 | 26 | 14 | 12 | 24 | 8 | 16 | 20 | 7 | 13 |
| | (17%) | (12%) | (23%) | (16%) | (14%) | (21%) | (16%) | (10%) | (22%) | (11%) | (7%) | (15%) |
| Located, not interviewed[a] | 12 | 6 | 6 | 6 | 4 | 2 | 8 | 4 | 4 | 7 | 4 | 3 |
| | (7%) | (6%) | (8%) | (4%) | (4%) | (3%) | (5%) | (5%) | (5%) | (4%) | (4%) | (3%) |
| Not located | 6 | 2 | 4 | 8 | 3 | 5 | 11 | 3 | 8 | 1 | 0 | 1 |
| | (3%) | (2%) | (5%) | (5%) | (3%) | (9%) | (7%) | (4%) | (11%) | (1%) | (0%) | (1%) |
| Out of area | 9 | 4 | 5 | 4 | 2 | 2 | 2 | 1 | 1 | 11 | 3 | 8 |
| | (5%) | (4%) | (6%) | (3%) | (2%) | (3%) | (1%) | (1%) | (1%) | (6%) | (3%) | (9%) |
| Refused | 3 | 0 | 3 | 8 | 5 | 3 | 3 | 0 | 3 | 1 | 0 | 1 |
| | (2%) | (0%) | (4%) | (5%) | (5%) | (5%) | (2%) | (0%) | (4%) | (1%) | (0%) | (1%) |
| Deceased | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | (0%) | (0%) | (0%) | (1%) | (1%) | (0%) | (0%) | (0%) | (0%) | (1%) | (0%) | (1%) |

TABLE C.4 (continued)

| Disposition | Memphis | | | Philadelphia | | | Yakima | | | All Sites | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total N=199 | QOP N=100 | Control N=99 | Total N=95 | QOP N=50 | Control N=45 | Total N=100 | QOP N=50 | Control N=50 | Total N=1,069 | QOP N=580 | Control N=489 |
| Complete | | | | | | | | | | | | |
| Total | 167 (84%) | 85 (85%) | 82 (83%) | 85 (89%) | 46 (92%) | 39 (87%) | 77 (77%) | 41 (82%) | 36 (72%) | 902 (84%) | 510 (88%) | 392 (80%) |
| Group | 103 (52%) | 65 (65%) | 38 (38%) | 64 (67%) | 37 (74%) | 27 (60%) | 54 (54%) | 34 (68%) | 20 (40%) | 534 (50%) | 341 (59%) | 193 (39%) |
| Field | 63 (32%) | 20 (20%) | 43 (43%) | 21 (22%) | 9 (18%) | 12 (27%) | 20 (20%) | 6 (12%) | 14 (28%) | 358 (33%) | 163 (28%) | 195 (40%) |
| Partial | 1 (1%) | 0 (0%) | 1 (1%) | 0 (0%) | 0 (0%) | 0 (0%) | 3 (3%) | 1 (2%) | 2 (4%) | 10 (1%) | 6 (1%) | 4 (1%) |
| Completed, by Instrument | | | | | | | | | | | | |
| Survey | 167 (84%) | 85 (85%) | 82 (83%) | 85 (89%) | 46 (92%) | 39 (87%) | 77 (77%) | 41 (82%) | 36 (72%) | 896 (84%) | 506 (87%) | 390 (80%) |
| Reading Phase I | 167 (84%) | 85 (85%) | 82 (83%) | 85 (89%) | 46 (92%) | 39 (87%) | 76 (76%) | 41 (82%) | 35 (70%) | 899 (84%) | 509 (88%) | 390 (80%) |
| Reading Phase II | 167 (84%) | 85 (85%) | 82 (83%) | 85 (89%) | 46 (92%) | 39 (87%) | 76 (76%) | 41 (82%) | 35 (70%) | 897 (84%) | 507 (87%) | 390 (80%) |
| Math Phase I | 166 (84%) | 85 (85%) | 81 (82%) | 85 (89%) | 46 (92%) | 39 (87%) | 76 (76%) | 41 (82%) | 35 (70%) | 897 (84%) | 508 (88%) | 389 (80%) |
| Math Phase II | 167 (84%) | 85 (85%) | 82 (83%) | 85 (89%) | 46 (92%) | 39 (87%) | 74 (74%) | 40 (80%) | 34 (68%) | 894 (84%) | 505 (87%) | 389 (80%) |
| Not Completed | | | | | | | | | | | | |
| Total | 31 (16%) | 14 (14%) | 17 (17%) | 10 (11%) | 4 (8%) | 6 (13%) | 22 (22%) | 9 (18%) | 13 (26%) | 163 (15%) | 68 (12%) | 95 (19%) |
| Located, not interviewed[a] | 16 (8%) | 7 (7%) | 9 (9%) | 4 (4%) | 1 (2%) | 3 (7%) | 4 (4%) | 0 (0%) | 4 (8%) | 57 (5%) | 26 (4%) | 31 (6%) |
| Not located | 0 (0%) | 0 (0%) | 0 (0%) | 3 (3%) | 1 (2%) | 2 (4%) | 4 (4%) | 1 (2%) | 3 (6%) | 33 (3%) | 10 (2%) | 23 (5%) |
| Out of area | 7 (4%) | 5 (5%) | 2 (2%) | 2 (2%) | 1 (2%) | 1 (2%) | 11 (11%) | 7 (14%) | 4 (8%) | 46 (4%) | 23 (4%) | 23 (5%) |
| Refused | 8 (4%) | 2 (2%) | 6 (6%) | 1 (1%) | 1 (2%) | 0 (0%) | 3 (3%) | 1 (2%) | 2 (4%) | 27 (3%) | 9 (2%) | 18 (4%) |
| Deceased | 1 (1%) | 1 (1%) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) | 1 (1%) | 0 (0%) | 1 (2%) | 4 (<1%) | 2 (<1%) | 2 (<1%) |

SOURCE: In-person survey and achievement tests.

[a]Includes cases who were located, but could not be contacted for an interview or who did not meet with the field interviewer when scheduled (passive refusals).

TABLE C.5

TELEPHONE SURVEY DISPOSITIONS, BY SITE AND QOP/CONTROL STATUS

| | Fort Worth | | | Cleveland | | | Washington, D.C. | | | Houston | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Disposition | Total N=177 | QOP N=100 | Control N=77 | Total N=158 | QOP N=100 | Control N=58 | Total N=154 | QOP N=80 | Control N=74 | Total N=186 | QOP N=100 | Control N=86 |
| Complete | 148 | 85 | 63 | 136 | 86 | 50 | 121 | 72 | 49 | 163 | 91 | 72 |
| | (84%) | (85%) | (82%) | (86%) | (86%) | (86%) | (79%) | (90%) | (66%) | (88%) | (91%) | (84%) |
| Telephone | 141 | 82 | 59 | 128 | 86 | 42 | 112 | 66 | 46 | 131 | 73 | 58 |
| | (80%) | (82%) | (77%) | (81%) | (86%) | (72%) | (73%) | (83%) | (62%) | (70%) | (73%) | (67%) |
| Mail | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| | (1%) | (2%) | (0%) | (0%) | (0%) | (0%) | (0%) | (0%) | (0%) | (2%) | (0%) | (3%) |
| Field | 5 | 1 | 4 | 8 | 0 | 8 | 9 | 6 | 3 | 29 | 18 | 11 |
| | (3%) | (1%) | (5%) | (5%) | (0%) | (14%) | (6%) | (8%) | (4%) | (16%) | (18%) | (13%) |
| Not Complete | 29 | 15 | 14 | 21 | 13 | 8 | 33 | 8 | 25 | 21 | 9 | 12 |
| | (16%) | (15%) | (18%) | (13%) | (13%) | (14%) | (21%) | (10%) | (34%) | (11%) | (9%) | (14%) |
| Not located[a] | 17 | 11 | 6 | 14 | 8 | 6 | 25 | 5 | 20 | 16 | 6 | 10 |
| | (10%) | (11%) | (8%) | (9%) | (8%) | (10%) | (16%) | (6%) | (27%) | (9%) | (6%) | (12%) |
| Located, not interviewed[b] | 8 | 3 | 5 | 4 | 2 | 2 | 6 | 3 | 3 | 3 | 2 | 1 |
| | (5%) | (3%) | (6%) | (3%) | (2%) | (3%) | (4%) | (4%) | (4%) | (2%) | (2%) | (1%) |
| Refused | 4 | 1 | 3 | 3 | 3 | 0 | 2 | 0 | 2 | 2 | 1 | 1 |
| | (2%) | (1%) | (4%) | (2%) | (3%) | (0%) | (1%) | (0%) | (3%) | (1%) | (1%) | (1%) |
| Deceased | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| | (0%) | (0%) | (0%) | (1%) | (1%) | (0%) | (0%) | (0%) | (0%) | (1%) | (0%) | (2%) |

TABLE C.5 (continued)

| Disposition | Memphis Total N=199 | Memphis QOP N=100 | Memphis Control N=99 | Philadelphia Total N=95 | Philadelphia QOP N=50 | Philadelphia Control N=45 | Yakima Total N=100 | Yakima QOP N=50 | Yakima Control N=50 | All Sites Total N=1,069 | All Sites QOP N=580 | All Sites Control N=489 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Complete | 164 | 86 | 78 | 78 | 42 | 36 | 83 | 41 | 42 | 893 | 503 | 390 |
| | (82%) | (86%) | (79%) | (82%) | (84%) | (80%) | (83%) | (82%) | (84%) | (84%) | (87%) | (80%) |
| Telephone | 158 | 86 | 72 | 76 | 41 | 35 | 77 | 40 | 37 | 823 | 474 | 349 |
| | (79%) | (86%) | (73%) | (80%) | (82%) | (78%) | (77%) | (80%) | (74%) | (77%) | (82%) | (71%) |
| Mail | 1 | 0 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 9 | 4 | 5 |
| | (1%) | (0%) | (1%) | (2%) | (2%) | (2%) | (1%) | (2%) | (0%) | (1%) | (1%) | (1%) |
| Field | 5 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 5 | 63 | 25 | 36 |
| | (3%) | (0%) | (5%) | (0%) | (0%) | (0%) | (5%) | (0%) | (10%) | (6%) | (4%) | (7%) |
| Not Complete | 34 | 13 | 21 | 17 | 8 | 9 | 15 | 8 | 7 | 170 | 74 | 96 |
| | (17%) | (13%) | (21%) | (18%) | (16%) | (20%) | (15%) | (16%) | (14%) | (16%) | (13%) | (20%) |
| Not located[a] | 25 | 13 | 12 | 11 | 5 | 6 | 12 | 7 | 5 | 120 | 55 | 65 |
| | (13%) | (13%) | (12%) | (12%) | (10%) | (13%) | (12%) | (14%) | (10%) | (11%) | (9%) | (13%) |
| Located, not interviewed[b] | 4 | 0 | 4 | 4 | 2 | 2 | 3 | 1 | 2 | 32 | 13 | 19 |
| | (2%) | (0%) | (4%) | (4%) | (4%) | (4%) | (3%) | (2%) | (4%) | (3%) | (2%) | (4%) |
| Refused | 5 | 0 | 5 | 2 | 1 | 1 | 0 | 0 | 0 | 18 | 6 | 12 |
| | (3%) | (0%) | (5%) | (2%) | (2%) | (2%) | (0%) | (0%) | (0%) | (2%) | (1%) | (2%) |
| Deceased | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 6 | 3 | 3 |
| | (1%) | (1%) | (0%) | (0%) | (0%) | (0%) | (2%) | (2%) | (2%) | (1%) | (1%) | (1%) |

SOURCE: Telephone survey.

[a]Includes cases who moved out of the range of the field interviewers and cases for whom we did not have a valid address.

[b]Includes cases who were located, but could not be contacted for an interview or who did not meet with the field interviewer when scheduled (passive refusals).

TABLE C.6

ITEM RESPONSE RATES FOR KEY OUTCOMES
(Percentages)

| Outcome[a] | QOP Group | Control Group | Total Sample |
|---|---|---|---|
| Mathematics test score (percentile) (Achievement tests) | 99.4 | 99.5 | 99.4 |
| Reading test score (percentile) (Achievement tests) | 99.6 | 99.7 | 99.7 |
| GPA (four-point scale) (transcripts) | 94.3 | 94.7 | 94.5 |
| Earned high school diploma (Telephone survey and transcripts) | 99.4 | 99.7 | 99.6 |
| Earned diploma or GED certificate (Telephone survey and transcripts) | 99.4 | 99.7 | 99.6 |
| Attending college (Telephone survey) | 99.6 | 99.5 | 99.6 |
| Attending postsecondary training (Telephone survey) | 99.2 | 99.0 | 99.1 |
| Postsecondary training or good job (Telephone survey) | 98.6 | 97.2 | 98.0 |
| Postsecondary training or high school or GED class, or any job (Telephone survey) | 99.8 | 100.0 | 99.9 |
| Attending or accepted into college (Telephone survey) | 99.6 | 99.7 | 99.7 |
| Binge drinking in past 30 days (In-person survey) | 95.7 | 98.0 | 96.7 |
| Used any illegal drug in past 30 days (In-person survey) | 96.9 | 97.4 | 97.1 |
| Committed any crime in past 12 months (In-person survey) | 96.5 | 96.4 | 96.4 |
| Ever arrested or charged (In-person survey) | 96.9 | 98.2 | 97.4 |
| Have one or more own children (Telephone survey) | 100.0 | 99.7 | 99.9 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. "College" means either a two-year or a four-year college. "Postsecondary training" means college, vocational/technical school, apprenticeship, or armed forces. A "good" job offers employer-sponsored health insurance. "Binge" drinking means five or more drinks in a row.

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

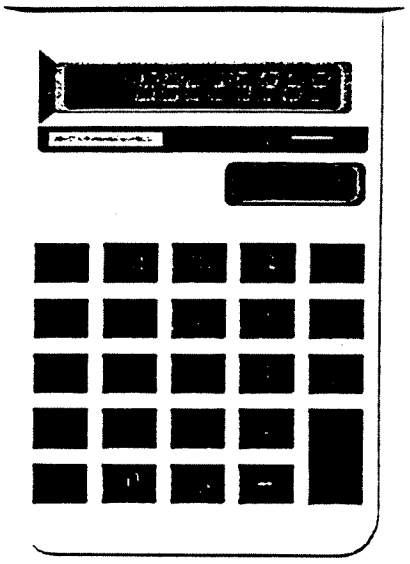
# EXHIBIT C.1

## ACHIEVEMENT TESTS IN MATHEMATICS AND READING

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# QUANTUM STUDY

## MATH
## PHASE I TEST



**Administered by**
**Mathematica Policy Research, Inc.**
**Princeton, NJ**

Questions 1-6 consist of two quantities, one in Column A and one in Column B. You are to compare the two quantities and completely fill in the space

**A** if the quantity in Column A is greater;
**B** if the quantity in Column B is greater;
**C** if the two quantities are equal;
**D** if the relationship cannot be determined from the information given.

Notes: 1) In some questions, information concerning one or both of the quantities to be compared is centered above the two columns.
2) A symbol that appears in both columns represents the same thing in Column A as it does in Column B.
3) Letters such as x, n, and k stand for real numbers.

**Sample Questions**

| | Column A | Column B | |
|---|---|---|---|
| **Example 1.** | 20% of 10 | 10 per cent of 20 | ○ ○ ● ○ <br> A B C D |

Oval C is marked in Example 1 since the quantity in Column A is equal to the quantity in Column B

---

| | | | |
|---|---|---|---|
| **Example 2.** | 6 X 6 | 12 + 12 | ● ○ ○ ○ <br> A B C D |

Oval A is marked in Example 2 since the quantity in Column A is greater than the quantity in Column B

---

| | | | |
|---|---|---|---|
| 1. | 10 x 3,337 | 33,370 | ○ ○ ○ ○ <br> A B C D |

---

| | | | |
|---|---|---|---|
| 2. | $4^x = 64$ <br> $8^y = 64$ <br> x | y | ○ ○ ○ ○ <br> A B C D |

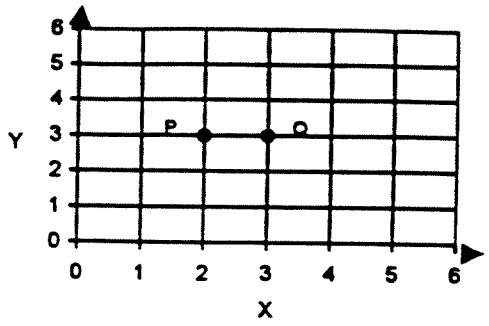
---

| | | | |
|---|---|---|---|
| 3. | $\frac{1}{2} + \frac{1}{3}$ | $\frac{1}{2} \times \frac{1}{3}$ | ○ ○ ○ ○ <br> A B C D |

---

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

| | Column A | Column B | |
|---|---|---|---|
| 4. | 2(-4) | -4 | ○ A ○ B ○ C ○ D |




| | Column A | Column B | |
|---|---|---|---|
| 5. | The sum of the x-coordinates points P and Q | The sum of the y-coordinates points P and Q | ○ A ○ B ○ C ○ D |
| 6. | 0.2 x 0.2 | 0.4 | ○ A ○ B ○ C ○ D |

Questions 7-15 have four or five suggested answers. Work each problem in your head or on the blank sheet of paper provided. Then look at the suggested answers and decide which one is best. Darken the oval of the answer you chose.

Note: Figures that accompany problems are drawn as accurately as possible EXCEPT when it is stated in a specific problem that its figure is not drawn to scale.

7. Sam has 68 baseball cards. Juanita has 127. Which number sentence could be used to find how many more cards Juanita has than Sam?

- ○ 68 + 127 = □
- ○ 68 - □ = 127
- ○ 127 + □ = 68
- ○ 127 - 68 = □

8. Which number is GREATEST?

- ○ 0.3
- ○ 0.297
- ○ 0.046
- ○ 0.27

9. Which number is between 0.07 and 0.08?

- ○ 0.008
- ○ 0.06
- ○ 0.075
- ○ 0.75

10. If $n$ is an ODD number, which of the following is an ODD number?

- ○ $n + 1$
- ○ $n - 1$
- ○ $n + 2$
- ○ $2n$

11. If $x < 8$ and $y < x$, then which of the following is TRUE?

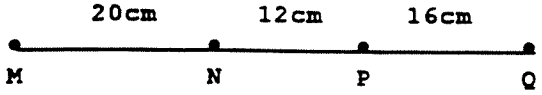
- ○ $x = y$
- ○ $y = 8$
- ○ $y < 8$
- ○ $y > 8$

12. Some children measured the length of a table. Each used a different length stick to measure it.

| Name | Number of Stick Lengths |
|---|---|
| Stephen | 10 |
| Erlane | 8 |
| Ana | 9 |
| Carlos | 7 |

Who used the longest stick?

- Stephen
- Erlane
- Ana
- Carlos




13. What is the distance between the midpoint of $MN$ and the midpoint of $PQ$ shown above?

- 18 cm
- 24 cm
- 26 cm
- 28 cm
- 30 cm

14. For all numbers $a$, $b$, $c$, and $d$, $a - (b + (c - d))$ is equal to

- $a - b - c + d$
- $a - b + c - d$
- $a - b - c - d$
- $a - b + c + d$

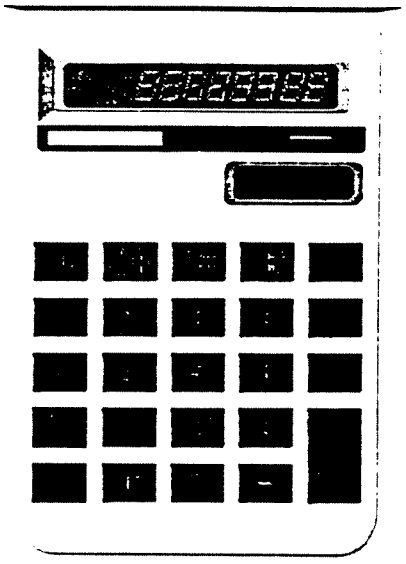
15. If $y = 3x^2$, what happens to $y$ if $x$ is doubled?

- $y$ is doubled.
- $y$ is multiplied by 4
- $y$ is multiplied by 6
- $y$ is multiplied by 12

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# QUANTUM STUDY

## MATH
## TEST L



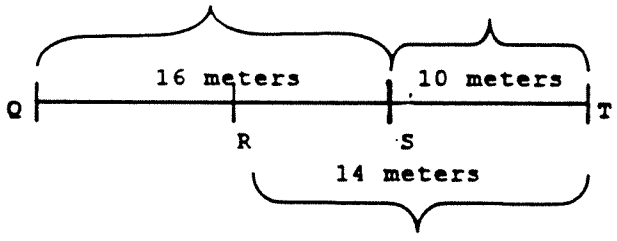
**Administered by**
**Mathematica Policy Research, Inc.**
**Princeton, NJ**

Questions 1-7 consist of two quantities, one in Column A and one in Column B. You are to compare the two quantities and completely fill in the space

**A** if the quantity in Column A is greater;
**B** if the quantity in Column B is greater;
**C** if the two quantities are equal;
**D** if the relationship cannot be determined from the information given.

Notes: 1) In some questions, information concerning one or both of the quantities to be compared is centered above the two columns.
2) A symbol that appears in both columns represents the same thing in Column A as it does in Column B.
3) Letters such as x, n, and k stand for real numbers.

| | Column A | Column B | |
|---|---|---|---|
| | $a = 2,\ b = 3$ | | |
| 1. | $ab$ | $a + b$ | ○ ○ ○ ○ A B C D |
| 2. | $\sqrt{9}$ | 9 | ○ ○ ○ ○ A B C D |
| | $x + y = 8$ | | |
| 3. | $x$ | $y$ | ○ ○ ○ ○ A B C D |
| 4. | $x - y$ | $y - x$ | ○ ○ ○ ○ A B C D |
| 5. | $42(23) + 42(21)$ | $42(23 + 21)$ | ○ ○ ○ ○ A B C D |
| 6. | A number between 7 and 15 | A number between 9 and 17 | ○ ○ ○ ○ A B C D |




**Note:** Figure not drawn to scale. QT is a line segment.

| | | | |
|---|---|---|---|
| 7. | Length of segment ST above | Length of segment RS above | ○ ○ ○ ○ A B C D |

Questions 8-15 have four or five suggested answers. Work each problem in your head or on the blank sheet of paper provided. Then look at the suggested answers and decide which one is best. Darken the oval of the answer you chose.

Note: Figures that accompany problems are drawn as accurately as possible EXCEPT when it is stated in a specific problem that its figure is not drawn to scale.

8. **Which drawing shows PARALLEL LINES?**

(A)  (B)  (C)  (D) 

- ○ A
- ○ B
- ○ C
- ○ D

9. **John won 5/8 of the games he played, Ted won 3/4, Jim won 9/16, and Rocky won 2/3. Which of the players had the worst record?**

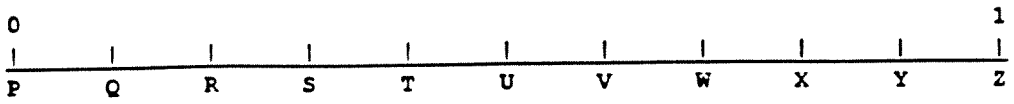
- ○ John
- ○ Ted
- ○ Jim
- ○ Rocky

10. **Four children stand in line. Molly is first in line. Jack is next to Molly. Eric is between Sue and Jack. Who is at the end of the line?**

- ○ Molly
- ○ Jack
- ○ Eric
- ○ Sue

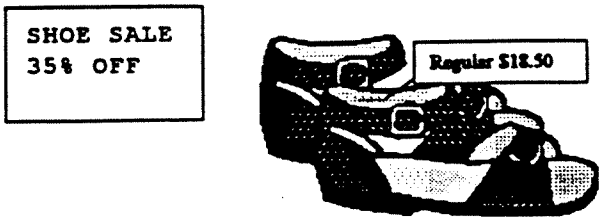
11. **If $y$ dollars are shared equally among four boys, how many dollars does each boy receive?**

- ○ $y - 4$
- ○ $\frac{4}{y}$
- ○ $4$
- ○ $\frac{y}{4}$
- ○ $4y$



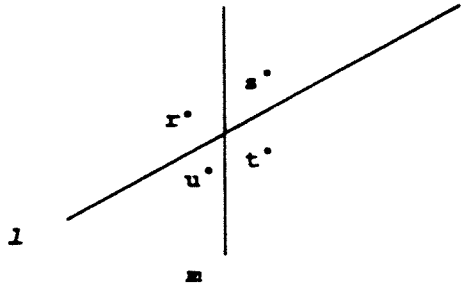

12. **The decimal 0.43 is between which two points?**

- P and Q
- Q and R
- T and U
- U and Z




13. **Which of the following is the best estimate of the sale price?**

- $6
- $7
- $12
- $15
- $25




14. **For the figure above, which of the following must be true?**

I. $r = t$
II. $r + t = s + u$
III. $s + t = 180$

- I only
- II only
- I and II only
- I and III only
- I, II, and III

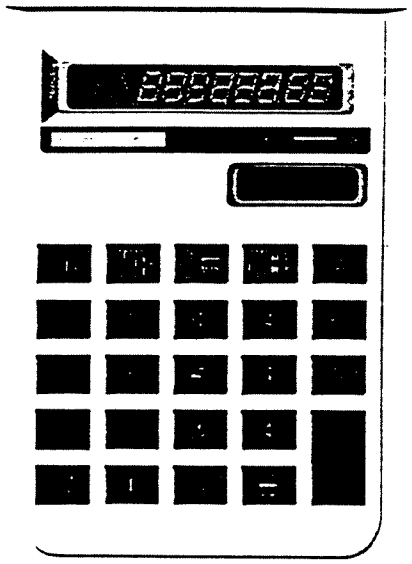
15. If the area of a square with side of length s is equal to the area of a rectangle with length 9 and width 4, then s =

- 4
- 5
- 6
- 8
- 18

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# QUANTUM STUDY

## MATH
## TEST M



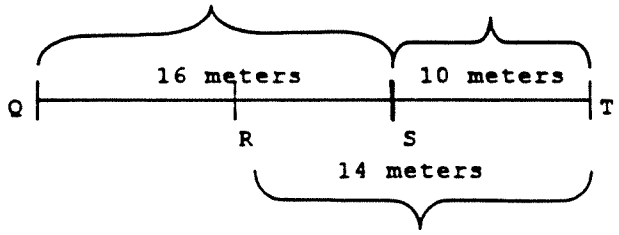
**Administered by**
**Mathematica Policy Research, Inc.**
**Princeton, NJ**

Questions 1-5 consist of two quantities, one in Column A and one in Column B. You are to compare the two quantities and completely fill in the space

**A** if the quantity in Column A is greater;
**B** if the quantity in Column B is greater;
**C** if the two quantities are equal;
**D** if the relationship cannot be determined from the information given.

Notes: 1) In some questions, information concerning one or both of the quantities to be compared is centered above the two columns.
2) A symbol that appears in both columns represents the same thing in Column A as it does in Column B.
3) Letters such as x, n, and k stand for real numbers.

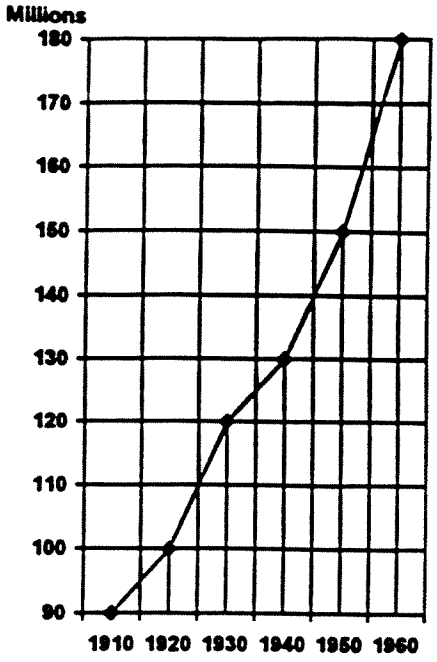
| | Column A | Column B | |
|---|---|---|---|
| 1. | $\sqrt{9}$ | 9 | ○ ○ ○ ○<br>A B C D |
| | $x + y = 8$ | | |
| 2. | x | y | ○ ○ ○ ○<br>A B C D |
| 3. | 42(23) + 42(21) | 42(23 + 21) | ○ ○ ○ ○<br>A B C D |




**Note:** Figure not drawn to scale. QT is a line segment.

| | Column A | Column B | |
|---|---|---|---|
| 4. | **Length of segment ST above** | **Length of segment RS above** | ○ ○ ○ ○<br>A B C D |

Population of the United States
1910-1960




| | Column A | Column B | |
|---|---|---|---|
| 5. | Ratio 1960 population, in millions, to 1910 population, in millions | 1 | ○ ○ ○ ○<br>A B C D |

Questions 6-15 have four or five suggested answers. Work each problem in your head or on the blank sheet of paper provided. Then look at the suggested answers and decide which one is best. Darken the oval of the answer you chose.

Note: Figures that accompany problems are drawn as accurately as possible EXCEPT when it is stated in a specific problem that its figure is not drawn to scale.

6. **Which is NOT the same as 100%?**

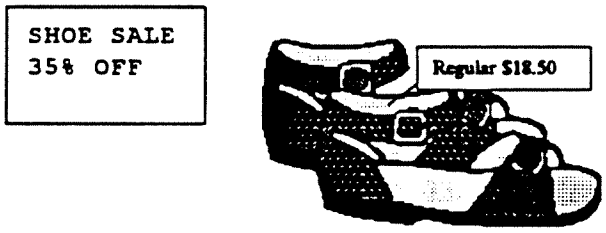
- ○ $\frac{10}{10}$
- ○ 1
- ○ 1.00
- ○ 1.00%

7. **Putting what number in ☐ will make the sentence true?**

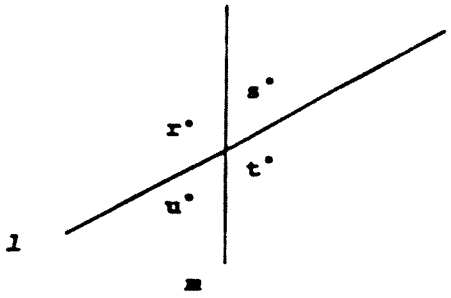
☐ - 5 = 5 - ☐

- ○ 0
- ○ 5
- ○ 10
- ○ Any number

8. **Which of the following is the best estimate of the sale price?**




- ○ $6
- ○ $7
- ○ $12
- ○ $15
- ○ $25




9. **For the figure above, which of the following must be true?**

I. $r = t$
II. $r + t = s + u$
III. $s + t = 180$

- ○ I only
- ○ II only
- ○ I and II only
- ○ I and III only
- ○ I, II, and III

10. **If $xy$ is a negative number, which of the following must be a positive number?**

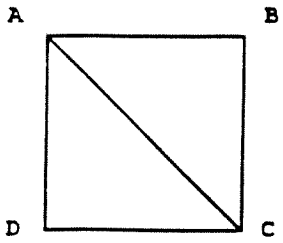
- ○ $-3xy$
- ○ $2xy^2$
- ○ $x^2y$
- ○ $x + y^2$
- ○ $-2x + y^2$

11. **If $f(n) = n + 5$, what is the value of $f(3)$?**

- ○ 3
- ○ 8
- ○ 15
- ○ $n + 3$
- ○ $3(n+5)$

12. **If $f(x) = x^3 - x^2 + x - 4$, what is $f(-3)$?**

- ○ -43
- ○ -37
- ○ -1
- ○ 17




13. **The area of square *ABCD* is 100 square centimeters. Which is true of the length of diagonal *AC* ?**

- It is equal to 10 centimeters.
- It is greater than 10 centimeters.
- It is less than 10 centimeters.
- It cannot be determined from the information given.

14. **If it costs 5¢ per square inch to process a photograph, a 3-inch by 5-inch print would cost 75¢ to process. Suppose the photograph is enlarged so that <u>each dimension is twice as long</u>. How much will it cost to process the enlargement?**

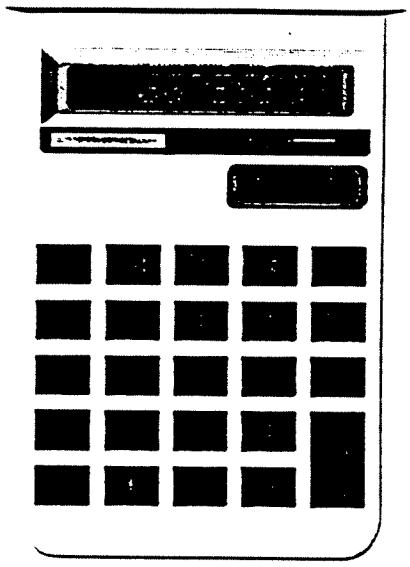
- $1.15
- $1.50
- $3.00
- $4.50

15. **If $3k + 7 < 0$ and k is an integer, what is the greatest possible value of k?**

- -7
- -4
- -3
- -2
- 3

# QUANTUM STUDY

## MATH
## TEST H



**Administered by**
**Mathematica Policy Research, Inc.**
**Princeton, NJ**

Questions 1-15 have four or five suggested answers. Work each problem in your head or on the blank sheet of paper provided. Then look at the suggested answers and decide which one is best. Darken the oval of the answer you chose.

Note: Figures that accompany problems are drawn as accurately as possible EXCEPT when it is stated in a specific problem that its figure is not drawn to scale.

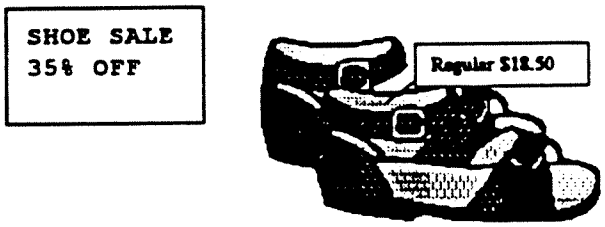
1. **Which is NOT the same as 100%?**

- ○ $\frac{10}{10}$
- ○ 1
- ○ 1.00
- ○ 1.00%

□ - 5 = 5 - □

2. **Putting what number in □ will make the sentence true?**

- ○ 0
- ○ 5
- ○ 10
- ○ Any number




3. **Which of the following is the best estimate of the sale price?**

- ○ $6
- ○ $7
- ○ $12
- ○ $15
- ○ $25

4. If the area of a square with side of length s is equal to the area of a rectangle with length 9 and width 4, then s =

- 4
- 5
- 6
- 8
- 18

5. If n is a positive integer, then the least odd integer greater than 2n is

- 2n + 1
- 2(n + 1)
- 2n + 3
- 2(n - 1)
- 2 + n

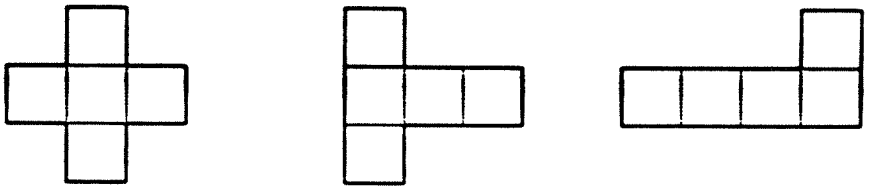
6. If xy = 1 and x is greater than 0, which of the following statements is true?

- When x is greater than 1, y is negative.
- When x is greater than 1, y is greater than 1.
- When x is less than 1, y is less than 1.
- As x increases, y increases.
- As x increases, y decreases.

7. If $f(x) = x^3 - x^2 + x - 4$, what is $f(-3)$?

- -43
- -37
- -1
- 17

8. Which of the patterns below can be folded along the dotted lines to form a cube-shaped box with a bottom but no top?



I II III

- I only
- I and II only
- II and III only
- I, II, and III

9. If it costs 5¢ per square inch to process a photograph, a 3-inch by 5-inch print would cost 75¢ to process. Suppose the photograph is enlarged so that <u>each dimension is twice as long</u>. How much will it cost to process the enlargement?

- ○ $1.15
- ○ $1.50
- ○ $3.00
- ○ $4.50

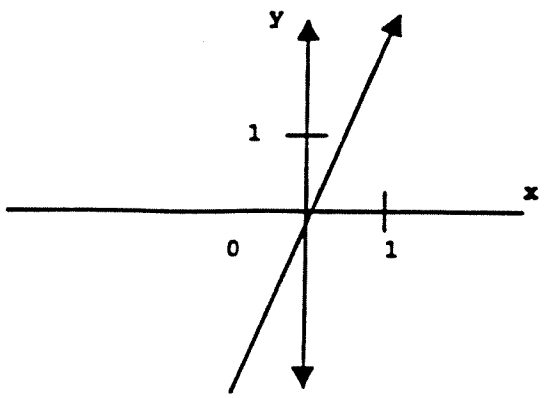
| | | | |
|---|---|---|---|
| X | 3 | 6 | P |
| y | 7 | Q | 35 |

10. The table above shows the values of x and y, where x is directly proportional to y. What are the values of P and Q?

- ○ P = 14 and Q = 31
- ○ P = 10 and Q = 14
- ○ P = 10 and Q = 31
- ○ P = 14 and Q = 15
- ○ P = 15 and Q = 14

11. Bill made the lowest score on the test. He only got 27 points. The teacher said the class mean was 63 and the range was 61. Jane made the highest score on the test. What score did Jane make?

- ○ 61
- ○ 63
- ○ 88
- ○ 90

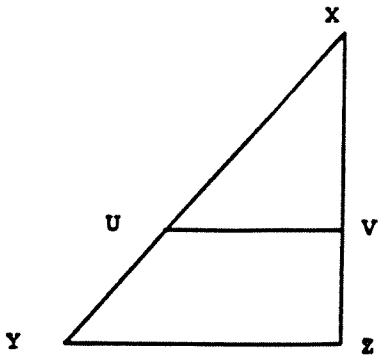



12. **Which of the following is most likely represented by the graph above?**

- $y = 1/2x$
- $y = x + 2$
- $y = 2x$
- $y = x^2$

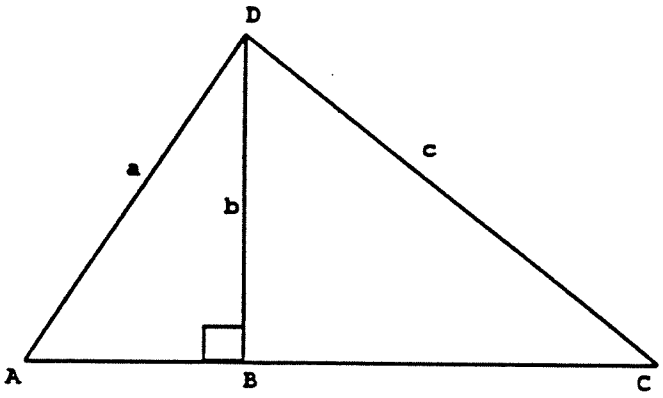
13. **A number is the multiplicative inverse of another number if the product of the two numbers is 1. For which of the following sets is it true that if a number is in the set, then so is its multiplicative inverse?**

- {1, 2, 3}
- {1, 1/2}
- {1, 2, 1/2}
- {2, 3, 5, 1/2, 1/3}
- {2, 3, 2/3}




14. If UV = 2, YZ = 3, XU = 3 and $\overline{UV} \parallel \overline{YZ}$, then UY is equal to

- 4 1/2
- 3
- 2
- 1 1/2
- 2/3

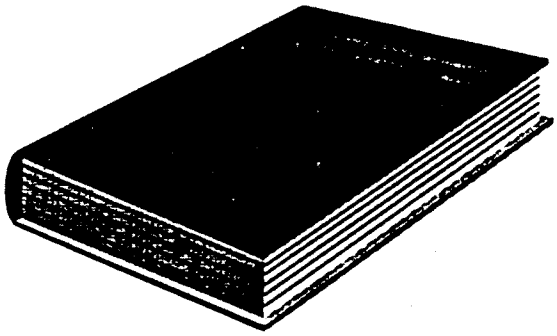



15. If AC = 3AB and $\overline{DB} \perp \overline{AC}$, then $c^2$, in terms of a and b, is equal to

- $4a^2 - 3b^2$
- $4a^2 - 2b^2$
- $4(a^2 + b^2)$
- $4a^2 + 5b^2$

# QUANTUM STUDY

## READING
## PHASE I TEST



Administered by
Mathematica Policy Research, Inc.
Princeton, NJ

This section includes three reading passages. Each passage is followed by questions based on its content. After reading a passage, choose the best answer to each question and fill in the corresponding oval. Answer all questions following a passage on the basis of what is stated or implied in that passage.

Questions 1-5 refer to the following passage.

nuts!

One day a troll was sitting in his cave eating walnuts from a large bag and complaining, as usual, about the terrible nuisance of having to crack the shells, when all at once he had an idea. " The best way to eat walnuts," he said to himself, " is to trick someone else into cracking them for you."

So he fetched a pearl from his treasure room, opened the next nut very carefully with a sharp knife so as not to spoil the shell, and put the pearl inside along with the meat. Then he glued the shell back together. " Now all I have to do," he said, " is to give this walnut to some greedy soul who'll find the pearl in it and insist on opening the lot to look for more!"

So he dressed himself as an old man with a long beard and went out into the world, taking along his nutcracker and the bag of walnuts with the special nut right on top. And he sat himself down by a country road to wait.

Pretty soon a woman came marching along. " Hey, there!" said the troll. " Want a walnut?" The woman looked at him shrewdly and was at once suspicious, but she didn't let on for a minute. " All right," she said. " Why not?"

" That's the way," said the troll, chuckling to himself. And he reached into the bag and took out the special walnut and gave it to her.

However, much to his surprise, she merely cracked the nut open, picked out the meat and ate it, and threw away the shell without a single word or comment. And then she went on her way and disappeared.

" That's strange," said the troll with a frown. " Either she swallowed my pearl or I gave her the wrong walnut to begin with."

He took out three more nuts that were lying on top of the pile, cracked them open, and ate the meat, but there was no pearl to be seen. He opened and ate four more. Still no pearl. And so it went, on and on all afternoon, till the troll had opened every walnut in the bag, all by himself after all, and had made a terrible mess on the road with the shells. But he never did find the pearl, and in the end he said to himself, " Well, that's that. She swallowed it." And there was nothing for it but to go back into the cave. But he took along a stomachache from eating all those nuts, and a temper that lasted for a week.

In the meantime the woman went on to the market where she took the pearl out from under her tongue, where she'd been saving it, and she traded it for two turnips and a butter churn and went on home again well pleased.

---

1. **Why did the troll leave his cave?**

- ○ To make someone wealthy
- ○ To make someone sick from his walnuts
- ○ To trick someone into cracking his walnuts
- ○ To get rid of his walnuts
- ○ To increase his own wealth

2. **The troll based his plan on the assumptions that, upon finding the pearl, the finder would**

- ○ grab it and run
- ○ look for pearls in the other walnuts
- ○ return it to the troll
- ○ pretend not to have noticed it
- ○ go back with the troll to seek more pearls

3. **What went wrong with the troll's plan?**

- ○ The troll had to clean up the mess on the road.
- ○ The troll lost the walnuts on the road.
- ○ The woman swallowed the pearl.
- ○ The woman was too clever for him.
- ○ The woman opened the wrong nut.

4. **The purchases made by the woman suggest that she is**

- ○ generous
- ○ fun-loving
- ○ honest
- ○ suspicious
- ○ practical

5. **Which of the following quotations best expresses one of the lessons to be learned from the story?**

- ○ To everything there is a season and a time to every purpose under the sun.
- ○ It is not enough to do good; one must do it the right way.
- ○ Oh, what a tangled web we weave, when first we practice to deceive.
- ○ Advice is seldom welcome, and those who need it most usually like it the least.
- ○ Nothing so needs reforming as other people's habits.

Questions 6-9 refer to the following passage.

To give some idea of how newly arrived human beings are, we might try setting the ages of geologic time against the span of our own twelve-month year. If we say that the Earth was first formed in January, then the primeval oceans came into being perhaps as early as March, certainly no later than June. Life first appeared in late August, the earliest fossils appeared in November, and the dinosaurs had their day in mid-December. The first humanlike forms entered the scene shortly before midnight on December 30, and *Homo Sapiens* appeared ten minutes before midnight on New Year's Eve.

---

6. **The main point of the passage is to**

- ○ emphasize how short a time humans have been on Earth.
- ○ give a brief description of the evolution of humans
- ○ present an outline of the various geological ages
- ○ support a particular theory about the formation of the Earth
- ○ make humans aware of how little control they have over their destiny

7. **In this passage, the history of the Earth is compared to**

- ○ the life span of a human
- ○ the four seasons
- ○ a series of holidays
- ○ a calendar
- ○ a clock

8. **The author seems LEAST certain about when**

- ○ *Homo Sapiens* first appeared
- ○ the first humanlike creatures appeared
- ○ there were dinosaurs on Earth
- ○ the oceans were formed
- ○ life on earth began

9. **In terms of the information in the passage, how long after the dinosaurs did the first humanlike forms appear?**

- ○ Ten minutes
- ○ One day
- ○ Two weeks
- ○ One month
- ○ One year

Questions 10-13 refer to the following passage.

Mercy Otis Warren, patriot, feminist, and author, believed that the faithful historian delineates characters truly, let the censure (5) fall where it will. Her insightful letters, her satirical sketches, and her boldness in attacking President John Adams' ideology show that she practiced (10) what she preached. The daughter of James Otis, a traditional provincial politician, Mercy Otis learned basic literary skills from an uncle, who through (15) his collection of books, opened up to her vistas of the larger world. However, once she could read and write, she was required to spend her time on needlework while she (20) enviously watched her brother James perfect his Latin and Greek. She resented this intensely, and wrote that if females dealt with trifles and men with power, the (25) " deficiency lies not so much in [the] inferior contexture of female intellects as in the different education bestowed on the sexes."

Marriages in the Otis family, (30) as well as all career decisions, reflected the " patriarchship" - Mercy Otis's own word for her father as an institution- who, she suggested, (35) used his children as pawns. Thus in 1754 she married James Warren, son of an ally of her father. James Warren, less gifted and ambitious than his wife, (40) realized her strength and declared in an intended compliment that she had a " woman's temperament but a man's mind."

Mercy Otis Warren saw in the (45) patriots' struggle against Great Britain reflections of her own fight for identity. When she took pen in hand, she recognized this as a bold and assertive act for a (50) female, but she held that the American Revolution revealed the unfolding of the spirit of universal liberty. In her play *The Group*, Warren caught the temper of radical (55) Boston with its protests against corrupt tax officials, police searches and British officeholders.

In 1805 Warren published her (60) unique three-volume history of the American Revolution. She presented the thesis that revolutions are the " sudden rotations in human (65) affairs...permitted by Providence, to remind mankind of their natural equality, to check the pride of wealth, to restrain the insolence of rank and family (70) distinctions, which too frequently oppress the various classes in society."

---

10. According to the passage, Mercy Otis Warren believed that a historian should

- ○ write in the first person as an eyewitness
- ○ make use of satire in writing history
- ○ subtly endorse the policies of politicians
- ○ write objectively with deference to no one
- ○ reassert a nation's infallibility

11. It can be inferred that Warren considered revolutions to be

- ○ a means of perpetuating class distinctions
- ○ destructive of a civilized way of life
- ○ a means of reaffirming arbitrary power
- ○ appropriate for righting wrongs
- ○ a means of ensuring a nation's continued wealth

12. **The passage supports all of the following statements about Warren EXCEPT:**

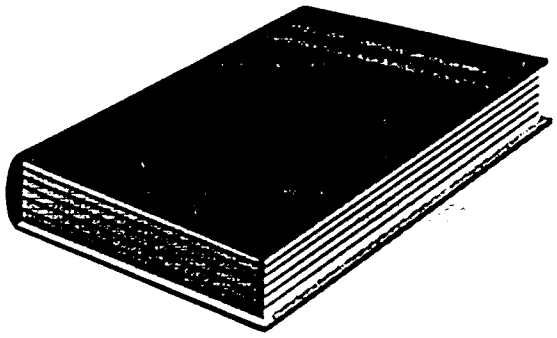
- ○ She was unconventional for her time.
- ○ She was more talented than her husband.
- ○ She was a versatile author.
- ○ She believed women should be educated.
- ○ She was censured for her activities.

13. **In the context of line 54, " caught the temper of" means**

- ○ aroused the wrath of
- ○ conveyed the emotional climate of
- ○ evoked a particular feeling in
- ○ accepted the blame for
- ○ was overwhelmed by the anger of

# QUANTUM STUDY

## READING
## TEST L



Administered by
Mathematica Policy Research, Inc.
Princeton, NJ

This section includes two reading passages. Each passage is followed by questions based on its content. After reading a passage, choose the best answer to each question and fill in the corresponding oval. Answer all questions following a passage on the basis of what is stated or implied in that passage.

Questions 1-6 refer to the following poem.

Rough Draft

" Compose yourself," he said to me. Later I open the spiral notebook of me and flip to a clean, white page of nothing. Taping the (5) broken pencil together, I sort through the wastepaper basket again and try a better version of myself. I messed up the last couple of chapters. He's always harping about (10) rewriting- Am I just a smeared rough draft needing revision until I'm neat and polished, with my emotions spelled correctly, the tenseness in my life in agreement? (15) " Compose yourself, Alex," he said to me. " Don't let her get to you like that." Easy for him to say, in his coat and tie, with his orderly file folders of homework and (20) his neatly collated life. How can I write the poems of October, the plays of April, the stories of June, with her always grabbing at my pen, blotting the lines, crumpling (25) the paper? A giant run-on-sentence, " unclear," " dangling," and " thoughts in no apparent order."
" Compose yourself, Alex," he said (30) to me. " Don't let her get to you like that. Write a journal entry to blow off steam, and maybe you can sort out your feelings." Typical English teacher- when in (35) doubt, write it out. But my rough draft stumbles in its own roughness. I'm four-letter words on a fogged bus window; A dirty jacket sleeve just wipes me clean. The ink (40) fades, the paper dissolves, and the blackness grows, swallowing me.
" Compose yourself," he said to me. And he gave me a pen to write.

---

1. **Throughout the poem a tension or conflict develops between**

   - ○ what the teacher says and what the teacher does
   - ○ the way Alex thinks and the way Alex behaves
   - ○ what the teacher tells Alex to do and Alex's inability to do it
   - ○ Alex's reputation in school and his reputation out of school

2. **Which of the following is closest in meaning to the phrase " spelled correctly" as it is used in line 13?**

   - ○ completed on time
   - ○ explored in detail
   - ○ written
   - ○ controlled

3. **What does the reader learn about the " her" mentioned in lines 16 and 23?**

   - ○ Alex finds her disturbing
   - ○ The teacher seems to like her
   - ○ Alex wishes he knew her better
   - ○ She seems to be a good student

4. **The tone of the phrase " Typical English teacher" (line 33) indicates that Alex at that moment is**

- ○ envious
- ○ surprised
- ○ proud
- ○ annoyed

5. **The picture of Alex in lines 39 and 40 is that of someone who is**

- ○ amused at his condition
- ○ hopeful about future prospects
- ○ overwhelmed by his situation
- ○ curious about his surroundings

6. **Which of the following phrases is an example of personification- giving human attributes to an inanimate object or abstract idea?**

- ○ " always harping about rewriting" (line 9)
- ○ " sort out your feelings" (line 33)
- ○ " when in doubt, write it out" (lines 34-35)
- ○ " my rough draft stumbles in its own roughness" (lines 35-37)

Questions 7-10 refer to the following passage.

Both jazz and one of its greatest figures, Louis Armstrong, were born in New Orleans. When he was a child, Armstrong taught (5) himself to play the cornet and the bugle. As a young man he worked by day as a coalman and a milkman, and at night he played with jazz groups. After jobs entertaining (10) guests on Mississippi River boat trips, Armstrong went to Chicago where he joined Erskine Tate's orchestra. There he switched instruments and, still without ever (15) taking a music lesson, became known as the " World's Greatest Trumpeter." Like all great performers, Armstrong possessed an instinctive musicianship. He (20) mellowed the brass-band sound of early jazz and introduced " scat" singing, using his gravelly voice as a musical instrument and singing nonsense syllables instead (25) of words. A superb entertainer, he appeared in films and Broadway shows and played to standing ovations in concerts around the world. On one of his European (30) tours in the 1930s, he played before England's King George VI, to whom he dedicated a musical number with the words, " This one's for you, Rex!" Armstrong was (35) internationally loved and admired throughout his long career. In 1971, he died at the age of seventy-one and the United States lost one of its finest goodwill (40) ambassadors.

---

**7. The main purpose of the passage is to**

- ○ analyze the development of jazz
- ○ present two sides of a controversy about Armstrong
- ○ describe an important event in Armstrong's life
- ○ give a biographical sketch of a jazz musician

**8. The author uses the phrase " standing ovations" (line 28) to show that Armstrong**

- ○ was an extremely popular performer
- ○ gave frequent concerts
- ○ played mostly jazz music
- ○ was active even at the end of a long career

**9. The tone of Armstrong's remark to King George VI (lines 33-34) can best be described as**

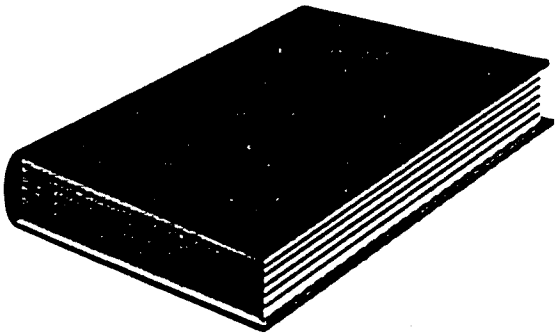
- ○ surprisingly informal
- ○ bitterly sarcastic
- ○ nervous and tense
- ○ sympathetic and soothing

**10. The passage best supports which of the following statements?**

- ○ Jazz is not as popular with audiences today as it was in the early 1900's.
- ○ It is possible to become a good musician without formal training.
- ○ Most American jazz musicians were extremely popular in Europe.
- ○ The trumpet is better suited to jazz music than are other types of brass instruments.

# QUANTUM STUDY

## READING
## TEST M



Administered by
Mathematica Policy Research, Inc.
Princeton, NJ

This section includes three reading passages. Each passage is followed by questions based on its content. After reading a passage, choose the best answer to each question and fill in the corresponding oval. Answer all questions following a passage on the basis of what is stated or implied in that passage.

Questions 1-3 refer to the following passage.

Both jazz and one of its greatest figures, Louis Armstrong, were born in New Orleans. When he was a child, Armstrong taught (5) himself to play the cornet and the bugle. As a young man he worked by day as a coalman and a milkman, and at night he played with jazz groups. After jobs entertaining (10) guests on Mississippi River boat trips, Armstrong went to Chicago where he joined Erskine Tate's orchestra. There he switched instruments and, still without ever (15) taking a music lesson, became known as the "World's Greatest Trumpeter." Like all great performers, Armstrong possessed an instinctive musicianship. He (20) mellowed the brass-band sound of early jazz and introduced "scat" singing, using his gravelly voice as a musical instrument and singing nonsense syllables instead (25) of words. A superb entertainer, he appeared in films and Broadway shows and played to standing ovations in concerts around the world. On one of his European (30) tours in the 1930s, he played before England's King George VI, to whom he dedicated a musical number with the words, "This one's for you, Rex!" Armstrong was (35) internationally loved and admired throughout his long career. In 1971, he died at the age of seventy-one and the United States lost one of its finest goodwill (40) ambassadors.

1. **The main purpose of the passage is to**

- ○ analyze the development of jazz
- ○ present two sides of a controversy about Armstrong
- ○ describe an important event in Armstrong's life
- ○ give a biographical sketch of a jazz musician

2. **The tone of Armstrong's remark to King George VI (lines 33-34) can best be described as**

- ○ surprisingly informal
- ○ bitterly sarcastic
- ○ nervous and tense
- ○ sympathetic and soothing

3. **The passage best supports which of the following statements?**

- ○ Jazz is not as popular with audiences today as it was in the early 1900's.
- ○ It is possible to become a good musician without formal training.
- ○ Most American jazz musicians were extremely popular in Europe.
- ○ The trumpet is better suited to jazz music than are other types of brass instruments.

Questions 4-7 refer to the following passage.

Of all the forces reshaping the American city, the most powerful and insistent are those rooted in changing methods of transportation. The changes are so big and obvious that it is easy to forget how remarkable they are. The streetcar has all but disappeared, the bus is proving an inadequate substitute, commuter rail service worsens, subways get dirtier, and new expressways pour more and more automobiles into the center of town. If transit riding continues to decline and if automobile use continues to rise unchecked, how can the vital core of the city survive? Many city planners say flatly that it cannot. The only sure way to relieve congestion and preserve the unifying core of the city, supporters of mass transit claim, is to get people out of private automobiles and into public transit -" to move people, not vehicles."

---

4. **The author suggests that the remarkable changes in transportation are often overlooked for which of the following reasons.**

- ○ They have taken place very gradually over the years.
- ○ They have proved to be more effective than old methods.
- ○ They are so obvious that they are taken for granted.
- ○ They have created new problems for city planners.
- ○ They have decreased congestion in the cities.

5. **The passage primarily is concerned with which of the following?**

- ○ Various factors influencing the American city
- ○ The disappearance of the streetcar
- ○ The need for faster automobiles
- ○ The growing network of expressways
- ○ The effects of transportation changes on the city

6. **According to the passage, many city planners feel that the growing use of automobiles rather than public transit will result in**

- ○ the construction of more and more expressways
- ○ the deterioration of the vital center of the city
- ○ the relief of congestion in the city
- ○ a decrease in commuter rail service
- ○ demands for limitations on the use of automobiles

7. **The author would probably support all of the following efforts EXCEPT**

- ○ charging higher parking fees in municipal garages
- ○ cleaning up the subway trains and stations
- ○ improving train service to the outlying suburbs
- ○ increasing the advertising budget for the transit system
- ○ building more highways into the centers of the cities

Questions 8-11 refer to the following passage.

The second appearance of James Weldon Johnson's poem, "Fiftieth Anniversary Ode," in 1917 prompted Stanley Braithwaite, the most respected Black literary critic of the time, to remark that this could be the beginning of a new awakening among Black writers. Although Johnson's most significant poetic achievement, *God's Trombones*, was still a decade away, Braithwaite appears to have picked the right year for the first sign of "awakening." Claude McKay's poem, "The Harlem Dancer," appeared in *Seven Arts* magazine in 1917, and it was this work that exemplified the creativity later described as the Harlem Renaissance.

---

8. The author's primary concern is apparently to introduce a discussion of

- ○ a turning point in Black poetry
- ○ the way in which various critics perceive Black poetry
- ○ the first Black writers in America
- ○ the literary value of Black poetry to America
- ○ the styles of poetry produced by Black Americans

9. According to the author, *God's Trombones* is noteworthy because it

- ○ is the best of James Weldon Johnson's poetry
- ○ was the first collection of Black poetry ever published
- ○ prompted Black poets to revise their literary style
- ○ was the most significant piece of literature published during the Harlem Renaissance
- ○ was responsible for Braithwaite's acclaim as a literary critic

10. It is apparent that, on the basis of the "*Fiftieth Anniversary Ode*," Braithwaite considered James Weldon Johnson to be

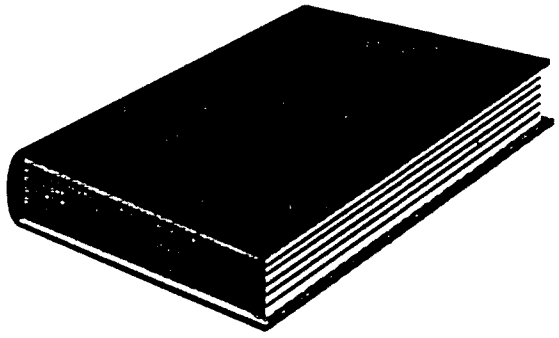
- ○ an amateur poet
- ○ an inspiring propagandist
- ○ a widely recognized genius
- ○ an unimaginative writer
- ○ a literary pioneer

11. In what year did *God's Trombones* first appear?

- ○ 1907
- ○ 1916
- ○ 1917
- ○ 1926
- ○ 1927

# QUANTUM STUDY

## READING
## TEST H



Administered by
Mathematica Policy Research, Inc.
Princeton, NJ

This section includes two pairs of reading passages. Each passage is followed by questions based on its content. After reading a passage, choose the best answer to each question and fill in the corresponding oval. Answer all questions following a passage on the basis of what is stated or implied in that passage.

Questions 1 - 4 refer to the following two passages about American novelists. These novelists wrote at about the same time.

Passage I

Edith Wharton (1862-1937)

There were several writers in New York at the end of the nineteenth century whose milieu was Fifth Avenue, the world of fashionable society. One of these was Edith Wharton, who pictured the frivolous New York world of fashion " in all its flatness and futility," to quote her own phrase.

Edith Wharton had grown up in the world she described in her writing. Like her contemporaries who shared this world, she kept her eyes turned toward Europe. However much she was in America, she was of it only in a sense. The frontier did not exist for her, nor did the melting pot that seethed in her native city. When she referred to the West, her tone assumed a marked hostility. She complained of its " soul-deadening ugliness."

---

Passage II

Willa Cather (1873-1947)

Willa Cather was always to look back with wonder to the scenes of her Nebraska youth...She had grown up largely out-of-doors; there was not even a school for her to go to.

Until Willa Cather wrote her stories, no one has ever conveyed a sense of the loneliness, hardships, courage, and triumphs of the people who lived on the frontier. She brought to life the tragedies that characterized frontier life and the pathos of people like " Aunt Georgiana," who had once taught music at the Boston Conservatory and had been exiled for years to a tall, grim, naked prairie house on the Nebraska plains. Still, Cather seemed to have a passion for the land and the skyline, seeing in that plains environment something soft, wild, and free. Whether she wrote of pain or pleasure, Cather recreated for the reader the background fragrance of sagebrush and clover, as well as the relentless wind and the endless sky.

---

1. **The idea connecting the two passages is**

- ○ the need for novelists to take responsibility
- ○ attitudes toward Eastern society
- ○ the United States as it seemed to two contemporaries
- ○ disappointment with United States culture

Questions 5-9 refer to these two passages about cooking in different parts of the world.

Passage I

The countries that make up what we call Southeast Asia stretch across some 4,000 miles. Each country is highly distinctive, and within each are separate cultures. Grouping them together to talk about their cookery should not suggest that their cuisines all feature exactly the same garlic and fish sauce. (As a matter of fact, they all do use a lot of garlic, which is the best bactericide in the human diet. It helps keep intestines healthy in tropical lands where harmful bacteria grow quickly in the food.)

Chinese influence is everywhere, the result of Chinese emigration and Chinese conquest. Chinese soy sauce, bean curd, and bean or pea sprouts appear in every country. The second most important foreign influence in the area is Indian. Indians carried their culture throughout the area in centuries past. Two Moslem countries, Malaysia and Indonesia, tend to borrow certain Indian culinary practices more than the other countries, which are, for the most part, Buddhist. Burma, of course, shows evidence of being a neighbor to India, and the Thais enjoy very hot peppers in their food, as many Indians do.

---

Passage II

One of the most attractive spots in the Caribbean is the sunny island of Puerto Rico. It was settled by the Spaniards and remained a Spanish possession until 1898. Today, it is a commonwealth under the United States flag.

*La cocina criolla*, the cuisine of Puerto Rico, was started by its earliest inhabitants, the Arawak Indians and the Caribs. Through the centuries, the dishes prepared by the Arawaks and Caribs have been enriched by the culinary skills of the descendants of the original Spanish settlers and further expanded by the cooking knowledge and preferences of the Africans who were brought to Puerto Rico to work in the sugar fields. Today the tasty result is a really distinctive cuisine.

---

5. **Given the information in these passages, if many, many people from a given country settle in another country, what is likely to happen?**

- ○ They will forget their traditional foods altogether.
- ○ They will influence the eating habits of the people already there.
- ○ They will seek entirely new foods.
- ○ They will request others to prepare food their way and eventually their kind of cooking will be the only one.

6. **What does the writer of passage I warn the reader about?**

- ○ Failing to realize the nutritious value of food
- ○ Failing to note the availability of food in a local region
- ○ Making generalizations about many different kinds of people
- ○ Remembering that people in tropical areas eat differently from other people

7. **In discussing the food of Malaysia, passage I suggests that a major influence on the way people eat can be**

- ○ the taste for certain spices
- ○ their closeness to a larger country
- ○ the climate
- ○ their religious beliefs

8. **In Puerto Rico, what change in food seems to have occurred over time?**

- ○ The basic foods remained the same, but the preparation changed.
- ○ The basic foods changed, but the Arawak and Carib flavorings remained.
- ○ Cooking divided into two groups: American Indian and Spanish.
- ○ Cooking became Spanish.

9. **What is the major similarity between the two passages?**

- ○ They describe the influence of foreign peoples on food grown.
- ○ They describe how traditions about food have grown in importance.
- ○ They describe outside influences on what people in an area eat.
- ○ They describe the effects of diet on people.

# EXHIBIT C.2

# THE IN-PERSON SURVEY

# NON-DC SITES

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

OMB No: 1205-0397
Expires: 11/30/2001

# QUANTUM STUDY
# YOUTH EXPERIENCES SURVEY

**U.S. Department of Labor**
**Ford Foundation**
**Washington, DC**



**Conducted by:**

**Mathematica Policy Research, Inc.**
**Princeton, NJ**

## A. INTRODUCTION

The following questions ask about activities in which you may or may not be involved. Your answers to these questions will be held in strict confidence and used only for the study. After you complete the questionnaire, please put it in the envelope provided and seal it. No one here will know what answers you gave to the survey questions.

Please answer each of the following questions by placing an "X" in the box next to the answer that best fits your situation. We estimate it will take about 30 minutes to complete this questionnaire.

## B. HIGH SCHOOL STATUS

B1. Are you currently attending high school (that is, a school granting or leading to a high school diploma)?

This does not include a school or program leading to a GED or a high school equivalency degree.

1 ☐ Yes

2 ☐ No → **GO TO C1, PAGE 2**

B2. What grade are you currently in?

1 ☐ 9th

2 ☐ 10th

3 ☐ 11th

4 ☐ 12th

B3. In what month and year will you graduate from high school?

|__|__|  |__|__|__|__|

MONTH  YEAR

## C. HIGH SCHOOL EXPERIENCE

C1. For the next three questions, think back to the last 12 months that you attended high school. How strongly do you agree or disagree with each of the following statements about schools and teachers:

*Mark one box for each statement*

| | Strongly Disagree | Disagree | Agree | Strongly Agree |
|---|---|---|---|---|
| a. Students at my school get/got along well with teachers . . . . . | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| b. Rules for behavior are/were strict . | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| c. The teaching is/was good . . . . . | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| d. I don't/didn't feel safe at school . . | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |

C2. During the last 12 months that you attended school were you ever:

| | Yes | No |
|---|---|---|
| a. Suspended or expelled from school? . . . . . | 1 ☐ | 2 ☐ |
| b. Drunk or "high" at school? . . . . . | 1 ☐ | 2 ☐ |

C3. Has any adult besides a family member positively influenced your life in some significant way? For example, teacher, counselor, coach, or minister?

*Do not include family members*

1 ☐ Yes
2 ☐ No → **GO TO C6, PAGE 4**

C4. What is the title or position of the adult (not counting family members) who had the most positive influence on your life? For example, teacher, principal, or coach?

*Do not include family members*

_____

C5. Please read the statements below about the person who influenced you most in life. For each statement, mark whether that statement is definitely true, mostly true, mostly not true, or definitely not true.

*Mark one box for each statement*

| | Definitely True | Mostly True | Mostly Not True | Definitely Not True |
|---|---|---|---|---|
| a. The person pays attention to and respects my ideas/feelings about things in my life | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| b. The person has helped me learn things that have helped me do well in my life | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| c. That person has helped me take advantage of opportunities to get ahead in my life | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| d. That person has recognized and appreciated the things I have done well in my life | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| e. That person has clear expectations and standards about what I do with my life | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| f. That person has shown me that fighting is not a good way of solving problems in my life | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| g. That person has shown me that breaking the law does not help me achieve my goals | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| h. That person has shown me that using drugs or alcohol is not a good way of solving problems in my life | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |

C6. The next question has to do with special programs other than your normal high school classes. These programs try to help students stay in school, make good grades, stay away from drugs, prepare for work or college, and make good decisions in life.

Since beginning the ninth grade, did you participate in any program like this?

1 ☐ Yes

2 ☐ No → **GO TO C10, PAGE 5**

C7. What was the name of that program? If you participated in more than one program, list programs in which you spent significant time participating.

PROGRAM NAME: _____

PROGRAM NAME: _____

PROGRAM NAME: _____

C8. In what activities did you participate in the program(s) you mentioned above? For example, learning to balance a check book, learning to live independently, basketball games, or going to the movies.

_____

_____

_____

C9. How much did that program(s) help you in the following ways:

| | A Lot | A Little | Not At All |
|---|---|---|---|
| a. Improve your grades | 1 ☐ | 2 ☐ | 3 ☐ |
| b. Stay away from drugs or get off of drugs | 1 ☐ | 2 ☐ | 3 ☐ |
| c. Stay out of trouble | 1 ☐ | 2 ☐ | 3 ☐ |
| d. Deal with the police and courts | 1 ☐ | 2 ☐ | 3 ☐ |
| e. Prepare for college | 1 ☐ | 2 ☐ | 3 ☐ |
| f. Earn and save money | 1 ☐ | 2 ☐ | 3 ☐ |

C10. Which of the following describe what you plan to be doing in October of this year, that is, in October 1999?

*Mark all that apply*

1 ☐ Continuing in high school

2 ☐ Attending a college or university (2- or 4-year program)

3 ☐ Attending a vocational, technical, trade, or business school, or enrolled in a certified apprenticeship program

4 ☐ Enlisted in a branch of the Armed Forces

5 ☐ Working at a job

6 ☐ Working towards a GED certificate

7 ☐ Other (specify) _____

## D. SUBSTANCE USE

D1. The next questions ask about activities such as crime and drug use. You may not have been involved in these activities, but we need you to answer each question as honestly and completely as you can. The confidentiality of your answers is guaranteed under federal law.

The first two questions are about drinking alcohol. This includes drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes. During the past 30 days, on how many days did you have at least one drink of alcohol?

1 ☐ 0 days → **GO TO D3, PAGE 6**

2 ☐ 1 to 7 days

3 ☐ 8 to 14 days

4 ☐ 15 or more days

D2. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?

1 ☐ 0 days

2 ☐ 1 to 7 days

3 ☐ 8 to 14 days

4 ☐ 15 or more days

D3. The next questions are about the use of drugs.

| | Yes | No |
|---|---|---|
| a. In the past 30 days have you smoked marijuana or hashish (*pot, hash, reefer, grass, weed, boat*)? | 1 ☐ | 2 ☐ |
| b. In the past 30 days have you used cocaine or crack cocaine? | 1 ☐ | 2 ☐ |
| c. In the past 30 days have you used heroin, opium, or methadone? | 1 ☐ | 2 ☐ |
| d. In the past 30 days have you used amphetamines, methamphetamine, speed or other uppers (*ice, crank, crystal, meth, white crosses, black beauties, diet pills, or drugs for which you do not have a prescription such as Benzedrine, Preludin, Ritalin, etc.*)? | 1 ☐ | 2 ☐ |
| e. In the past 30 days have you used barbituates, sedatives, hypnotics, or other downers (*sleeping pills, quaaludes, or drugs for which you do not have a prescription such as Xanax, Darvon, Percodan, etc.*)? | 1 ☐ | 2 ☐ |
| f. In the past 30 days have you used any inhalants (*glue, aerosol from hairspray, White Out, etc.*)? | 1 ☐ | 2 ☐ |
| g. In the past 30 days have you used any hallucinogens *(L.S.D., etc.)* | 1 ☐ | 2 ☐ |

D4. How old were you when you first used any of the drugs mentioned above?

|__|__| YEARS OLD

☐ Check this box if you have not tried drugs

## E. EXPERIENCE WITH GANGS

E1. In the past 12 months, were you ever involved in gang fights, even if you weren't a gang member?

1 ☐ Yes

2 ☐ No

E2. Have you ever been a gang member?

1 ☐ Yes

2 ☐ No → **GO TO F1**

E3. Are you currently a gang member?

1 ☐ Yes

2 ☐ No

## F. EXPERIENCE WITH CRIME

F1. These questions are about your experiences with crime. The confidentiality of your answers is guaranteed under federal law.

| | Yes | No |
|---|---|---|
| a. During the past 12 months have you sold illegal drugs? | 1 ☐ | 2 ☐ |
| b. During the past 12 months have you stolen or tried to steal a motor vehicle such as a car, truck, or motorcycle? | 1 ☐ | 2 ☐ |
| c. During the past 12 months have you stolen **something other than a motor vehicle or robbed someone?** | 1 ☐ | 2 ☐ |
| d. During the past 12 months have you attacked and seriously hurt or killed someone? | 1 ☐ | 2 ☐ |
| e. During the past 12 months have you carried a hand gun? | 1 ☐ | 2 ☐ |
| f. During the past 12 months have you committed **sexual assault** | 1 ☐ | 2 ☐ |

F2. During the past 12 months, were you involved in any other illegal activities not mentioned here?

1 ☐ Yes

2 ☐ No → **GO TO F4**

F3. What were they?

_____

_____

_____

F4. How old were you when you first got involved with any of the illegal activities listed above?

|__|__| YEARS OLD

☐ Check this box if you have not been involved in illegal activities

## G. EXPERIENCE WITH POLICE AND COURTS

G1. These next questions are about experiences you may have had with the police and courts.

Have you ever been arrested or charged with a crime or parole violation?

1 ☐ Yes

2 ☐ No → **GO TO H1, PAGE 11**

G2. Please indicate how many separate times you have been...

*If none, enter "00"*

a. Arrested . . . . . |__|__| TIMES

b. Convicted . . . . . |__|__| TIMES

c. Incarcerated before conviction . . . . . |__|__| TIMES

d. Incarcerated after conviction . . . . . |__|__| TIMES

e. Put on probation . . . . . |__|__| TIMES

f. Put on parole . . . . . |__|__| TIMES

G3. Please indicate which of the following you have been charged with:

*Mark all that apply*

1 ☐ Aggravated Assault
2 ☐ Arson
3 ☐ Burglary
4 ☐ Disorderly conduct
5 ☐ Use or possession of drugs
6 ☐ Sale or manufacture of drugs
7 ☐ Drunkenness, liquor laws, or driving under the influence
8 ☐ Fraud
9 ☐ Larceny or theft
10 ☐ Loitering, vagrancy or curfew violation
11 ☐ Motor vehicle theft or car-jacking
12 ☐ Murder or manslaughter
13 ☐ Offenses against your family or children
14 ☐ Parole or probation violation
15 ☐ Rape
16 ☐ Robbery
17 ☐ Sex offenses (including prostitution and solicitation)
18 ☐ Shoplifting
19 ☐ Simple assault
20 ☐ Stolen property (either buying, receiving or possession of)
21 ☐ Vandalism
22 ☐ Carrying or possession of weapons
23 ☐ Other *(Specify)*

_____

_____

## H. YOUR HEALTH

H1. In general, would you say your health is:

1 ☐ Excellent
2 ☐ Very good
3 ☐ Good
4 ☐ Fair
5 ☐ Poor

H2. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

a. **Moderate activities,** such as moving a table or pushing a vacuum cleaner

1 ☐ Yes, limited a lot
2 ☐ Yes, limited a little
3 ☐ No, not limited at all

b. Climbing **several** flights of stairs

1 ☐ Yes, limited a lot
2 ☐ Yes, limited a little
3 ☐ No, not limited at all

H3. During the past 4 weeks, have you had any of the following problems with your school, work, or other regular daily activities as a result of your physical health?

a. **Accomplished less** than you would like

1 ☐ **Yes**
2 ☐ No

b. Were limited in the **kind** of school, work or other activities you could do

1 ☐ Yes
2 ☐ No

H4. During the past 4 weeks, have you had any of the following problems with your school, work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

a. **Accomplished less** than you would like

1 ☐ Yes

2 ☐ No

b. Did not do school, work, or other activities as **carefully** as usual

1 ☐ Yes

2 ☐ No

H5. During the past 4 weeks, how much did pain interfere with your normal activities at school, work, or home?

1 ☐ Not at all

2 ☐ A little bit

3 ☐ Moderately

4 ☐ Quite a bit

5 ☐ Extremely

H6. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks:

a. Have you felt calm and peaceful?

1 ☐ All of the time

2 ☐ Most of the time

3 ☐ A good bit of the time

4 ☐ Some of the time

5 ☐ A little bit of the time

6 ☐ None of the time

b. Did you have a lot of energy?

1 ☐ All of the time
2 ☐ Most of the time
3 ☐ A good bit of the time
4 ☐ Some of the time
5 ☐ A little bit of the time
6 ☐ None of the time

c. Have you felt sad or depressed?

1 ☐ All of the time
2 ☐ Most of the time
3 ☐ A good bit of the time
4 ☐ Some of the time
5 ☐ A little bit of the time
6 ☐ None of the time

H7. During the <u>past 4 weeks</u>, how much of the time has your <u>physical health or emotional problems</u> interfered with your social activities (like visiting with friends, relatives, etc.)?

1 ☐ All of the time
2 ☐ Most of the time
3 ☐ A good bit of the time
4 ☐ Some of the time
5 ☐ A little bit of the time
6 ☐ None of the time

H8. How strongly do you agree or disagree with each of the following statements about your life:

*Mark one box for each statement*

| | Strongly Disagree | Disagree | Agree | Strongly Agree |
|---|---|---|---|---|
| a. Bad things happen to people like me | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| b. I'm afraid my life will be unhappy. | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| c. I like the way I look | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |
| d. I'll probably die before I'm thirty | 1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ |

H9. The next three questions ask about AIDS/HIV education and information.

Have you ever been taught about AIDS/HIV infection in school?

1 ☐ Yes

2 ☐ No

H10. Have you ever talked about AIDS/HIV infection with adults outside your family or school, such as a doctor, nurse, or minister?

1 ☐ Yes

2 ☐ No

H11. Have you ever had sexual intercourse?

1 ☐ **Yes**

2 ☐ No → **GO TO H14, PAGE 15**

H12. How old were you when you had sexual intercourse for the first time?

|__|__| YEARS OLD

H13. The last time you had sexual intercourse, did you or your partner use a condom?

1 ☐ Yes
2 ☐ No

H14. Do you think the activities listed below are always wrong, sometimes wrong, or not at all wrong?

*Mark one box for each activity*

| | Always Wrong | Sometimes Wrong | Not Wrong |
|---|---|---|---|
| a. Using drugs or alcohol frequently | 1 ☐ | 2 ☐ | 3 ☐ |
| b. Committing crimes such as stealing, assaulting someone, or selling drugs | 1 ☐ | 2 ☐ | 3 ☐ |
| c. Having a baby while you are a teenager | 1 ☐ | 2 ☐ | 3 ☐ |
| d. Dropping out of school | 1 ☐ | 2 ☐ | 3 ☐ |

***Thank you for completing this questionnaire!***

***Please put it in the envelope provided and seal it.***

# EXHIBIT C.3

## THE TELEPHONE SURVEY

## QOP GROUP, NON-DC SITES

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

OMB No: 1205-0397
Expires: 11/30/2001

# QUANTUM STUDY
# YOUTH EXPERIENCES SURVEY II

**U.S. Department of Labor**
**Ford Foundation**
**Washington, DC**

This questionnaire will take an average of 30 minutes to complete. If you have comments regarding this estimate or other aspects of the survey, including suggestions for reducing the time needed to respond, please send them to the Office of Information Management, Department of Labor, Room N-1301, 200 Constitution Avenue, N.W., Washington, DC 20210 and to the Office of Management and Budget Paperwork Reduction Project (1205-0397), Washington DC 20503. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB number for this project is 1205-0397.

The confidentiality of your answers is guaranteed under federal law (the Privacy Act of 1974 and U.S. Code Title 42 Section 3789g). Your answers cannot be released in any manner which would enable someone to identify you, unless you give prior written consent. This includes protecting your answers from the police, courts, or others.

**Conducted by:**

**Mathematica Policy Research, Inc.**
**Princeton, NJ**

Participant Survey

## A. INSTRUCTIONS

**About This Questionnaire:** When you were in the ninth grade, you signed up to participate in the Quantum Study, which is sponsored by the U.S. Department of Labor and the Ford Foundation. As part of the study, we are asking young adults to complete a questionnaire about themselves and how they are doing.

**Confidentiality:** Your answers to these questions will be held in strict confidence and used only for the study. A certificate from the federal government protects us from having to reveal the information that you give us to anybody such as your parents, the police, courts, or other people.

**Instructions:** Please answer each of the following questions by placing an "X" in the box next to the answer that best fits your situation. Follow all "GO TO" instructions after marking a box. These instructions indicate which question you should answer next. If no "GO TO" instruction is provided, you should continue to the next question. We estimate that it will take about 30 minutes to complete the questionnaire.

In recognition of your partnership with the Quantum Study, when you have returned the completed questionnaire, we will mail you a check for $10.00. Please return the questionnaire in the enclosed envelope. If you have any questions, call Julie Johnson at 1-888-535-0283 (toll-free).

## B. HIGH SCHOOL EXPERIENCE

B1. These first questions are about your current high school status. Have you:

*Mark one answer*

1☐ Completed a high school degree or GED

2☐ Left high school before graduating, or ➡ **GO TO B6 ON PAGE 2**

3☐ Are you still attending high school (that is, a school granting or leading to a high school diploma, not a GED)? ➡ **GO TO B4 ON PAGE 2**

B2. Did you earn a:

*Mark one answer*

1☐ High school diploma

2☐ GED

3☐ High school certificate

B3. In what month and year did you complete your high school diploma, GED, or high school certificate?

|__|__| |__|__|__|__| ➡ **GO TO B10 ON PAGE 3**

MONTH YEAR

B4. What grade are you currently in?

1☐ 9th

2☐ 10th

3☐ 11th

4☐ 12th

B5. CHECKPOINT: Did you leave high school before graduating?

1☐ Yes ➡**CONTINUE**

2☐ No ➡ **GO TO B10 ON PAGE 3**

B6. In what month and year did you last attend high school (that is, a school granting or leading to a high school diploma)?

*This does not include a school or program leading to a GED or a high school equivalency degree.*

|__|__| |__|__|__|__|

MONTH YEAR

B7. What grade were you in when you last attended high school?

1☐ 9th

2☐ 10th

3☐ 11th

4☐ 12th

B8. Do you plan to get a high school diploma or a GED?

1☐ Yes

2☐ No **➡GO TO B10**

B9. Are you currently taking a class to prepare for the GED exam?

1☐ Yes

2☐ No

B10. What is the name of the high school you last attended (or are currently attending)?

SCHOOL NAME: _____

B11. Where is this school located?

CITY: _____ STATE: |__|__|

B12. Did you attend any other high schools?

1☐ Yes

2☐ No **➡ GO TO B14 ON PAGE 4**

B13. What are the names and locations of the other high schools you attended?

A. SCHOOL NAME: _____

CITY: _____ STATE: |__|__|

B. SCHOOL NAME: _____

CITY: _____STATE: |__|__|

C. SCHOOL NAME: _____

CITY: _____STATE: |__|__|

B14. Were you (or have you ever been) suspended from high school for disciplinary reasons?

*Please include both in-school and out-of-school suspensions and detentions.*

1☐ Yes

2☐ No ➡ **GO TO B16**

B15. How many times were you (or have you been) suspended from high school?

|__|__| TIMES

B16. Were you (or have you ever been) expelled from high school?

1☐ Yes

2☐ No ➡ **GO TO B18 ON PAGE 5**

B17. How many times were you (or have you been) expelled from high school?

|__|__| TIMES

B18. CHECKPOINT: Are you currently attending high school?

1☐ Yes ➡ **GO TO PART E ON PAGE 13**

2☐ No ➡ **CONTINUE**

## C. EDUCATION AND TRAINING

C1. These next questions are about what you've been doing since leaving high school. Are you currently enrolled in a college or university, or have you been accepted to a college or university, including a two-year college or community college?

1☐ Yes ➡ **GO TO C10 ON PAGE 7**

2☐ No

C2. Are you currently enrolled in a certified apprenticeship program?

*In an apprenticeship program, an employer forms a relationship with an employee in which the worker, or apprentice, learns an occupation in a structured program sponsored jointly by employers and labor unions or operated by employers and employee associations. Plumbers are an example of professionals who are trained through apprenticeship programs.*

1☐ Yes ➡ **GO TO C16 ON PAGE 9**

2☐ No

C3. Are you currently enrolled in a vocational, technical, business, or trade school?

*Include beauty school and secretarial or nursing courses.*

1☐ Yes➡ **GO TO C16 ON PAGE 9**

2☐ No

C4. Are you currently enlisted in the armed forces?

*This includes the Army, Navy, Marine Corps, Air Force, and Coast Guard. It does not include the reserves.*

1☐ Yes

2☐ No ➡ **GO TO C6**

C5. In what branch of the armed forces are you enlisted?

1☐ Army

2☐ Navy

3☐ Air Force

4☐ Marine Corps

5☐ Coast Guard

**GO TO PART E ON PAGE 13**

C6. Are you currently working for pay?

1☐ Yes ➡ **GO TO D3 ON PAGE 11**

2☐ No

C7. What are you doing now?

_____

_____

_____

_____

C8. Even though you aren't now working, enrolled in school, or enlisted, have you applied to any of the following?

| | Yes | No |
|---|---|---|
| A. A college or university, including a two-year college or community college | 1☐ | 2☐ |
| B. A certified apprenticeship program | 1☐ | 2☐ |
| C. A vocational, technical, business, or trade school | 1☐ | 2☐ |
| D. The armed forces | 1☐ | 2☐ |

C9. Why aren't you continuing your education or training past high school *at this time*?

_____

_____

_____

_____

**GO TO D2 ON PAGE 10**

C10. Are you currently attending classes, or have you been accepted but are not yet attending classes?

1☐ Attending classes

2☐ Accepted but not yet attending

C11. What type of college or university are you or will you be attending?

*Mark one answer*

1☐ A 4-year college or university

2☐ A 2-year college or community college

3☐ Other *(specify)*

_____

C12. What is the name and location of the college or university you are (or will be) attending?

NAME: _____

CITY: _____ STATE: |__|__|

C13. Are you (or will you be) attending college full-time or part-time?

1☐ Full-time

2☐ Part-time

C14. How are you or will you be paying for college? Are you using money from:

*Mark all that apply*

1☐ Your parents or other relatives

2☐ Grants or scholarships (includes financial aid you *do not* have to pay back)

3☐ Loans (includes financial aid you have to pay back)

4☐ Personal savings

5☐ ROTC

6☐ Earnings from a work study job

7☐ Earnings from another job

8☐ Money from your Quantum account

9☐ Other source *(specify)*

_____

C15. What is the highest degree you think you will obtain?

*Mark one answer*

1☐ Associate's degree (A.A.)

2☐ Bachelor's degree (B.A.)

3☐ Master's degree (M.A.)

4☐ Doctorate (Ph.D.) or professional degree (medicine, law, or other)

**GO TO PART D ON PAGE 10**

C16. In what type of certified apprenticeship program or trade school are you enrolled?

_____

_____

C17. Are you enrolled full-time or part-time?

1☐ Full-time

2☐ Part-time

C18. What is the name and location of that program or school?

NAME: _____

CITY: _____ STATE: |__|__|

**GO TO PART D ON PAGE 10**

## D. EMPLOYMENT

D1. Are you currently working for pay?

1☐ Yes ➡ **GO TO D3 ON PAGE 11**

2☐ No

D2. What are your reasons for not working?

*Mark all that apply*

1☐ In school, military, or training program

2☐ Looking for a job

3☐ Unable to find a good job/job that pays enough

4☐ Don't want to work

5☐ Don't need to work

6☐ Transportation problems

7☐ Need to stay with my children

8☐ Need to care for other children in the household

9☐ Need to care for sick relative

10☐ I have a health problem/disability

11☐ Other *(specify)*

_____

**GO TO PART E ON PAGE 13**

D3. Are you working at a full-time or part-time job?

*If you are working at more than one job, answer for the one you consider your main job.*

1☐ Full-time job

2☐ Part-time job

D4. What is your job title? For example, sales clerk, receptionist, brick layer.

_____

D5. What do you do at this job?

*Please clearly describe your job activities.*

_____

_____

_____

D6. How many hours per week do you usually work on this job?

|__|__| HOURS PER WEEK

D7. How much do you earn per hour on this job before taxes and other deductions?

*If you are not paid by the hour, mark this box and go to D8 on page 12.* |__|

$ |__|__| . |__|__| PER HOUR

D8. How much in total do you usually earn per pay period on this job before taxes and other deductions? Please include any tips, bonuses, or commissions that you receive.

$ |__|__| , |__|__|__| . |__|__| AMOUNT EARNED

D9. Is this amount earned:

1☐ Per week

2☐ Per month

3☐ Once every two weeks

4☐ Twice a month

5☐ Per day

6☐ Per year

D10. Is health insurance or an HMO plan available to you through this job, regardless of whether or not you participate? This includes health insurance that is offered to you at a cost.

1☐ Yes

2☐ No

D11. Does your employer provide on-the-job training programs for employees?

1☐ Yes

2☐ No ➡ **GO TO PART E ON PAGE 13**

D12. Have you received any on-the-job training?

1☐ Yes

2☐ No

## E. EXPERIENCES WITH QUANTUM

E1. Have you participated in any Quantum activities since being selected for the program?

1☐ Yes

2☐ No ➡ **GO TO E16 ON PAGE 17**

E2. Are you currently participating in the Quantum Program? This includes participating in Quantum activities or keeping in touch with your Quantum counselor or other Quantum staff.

1☐ Yes ➡ **GO TO E5 ON PAGE 14**

2☐ No

E3. In what month and year did you last participate in the Quantum Program?

|__|__|  |__|__|__|__|

MONTH  YEAR

E4. Why did you stop participating in the Quantum Program?

*Mark all that apply*

1☐ Busy with sports/other school activities

2☐ Busy working at my job

3☐ Graduated

4☐ Dropped out of school

5☐ Transferred to another school

6☐ Moved out of the area

7☐ Didn't like people at Quantum Program

8☐ Wasn't interested/Quantum was boring/not helpful

9☐ Transportation problems

10☐ Child care problems

11☐ Own health problems

12☐ Other *(specify)*

_____

_____

E5. What is (or was) the one thing you found **most** helpful about the Quantum Program?

_____

_____

E6. What is (or was) the one thing you found **least** helpful about the Quantum Program?

_____

_____

E7. During the last 12 months you were in Quantum, please mark how many hours per week, on average, you spent on each of the following activities:

| | No Time | 1-5 Hours Per Week | More Than 5 Hours Per Week |
|---|---|---|---|
| A. Receiving help with school work from a tutor | 1☐ | 2☐ | 3☐ |
| B. Receiving computer-assisted instruction | 1☐ | 2☐ | 3☐ |
| C. Performing community service | 1☐ | 2☐ | 3☐ |
| D. Talking with your Quantum counselor about school or other things in your life | 1☐ | 2☐ | 3☐ |

E8. Below is a list of things that participating in Quantum may or may not have helped you with. For each of these things, please mark if you think participating in Quantum helped you a lot, a little, or not at all. Did participating in Quantum help you:

| | A Lot | A Little | Not At All |
|---|---|---|---|
| A. Make good decisions about your life | 1☐ | 2☐ | 3☐ |
| B. Stay in school | 1☐ | 2☐ | 3☐ |
| C. Make good grades | 1☐ | 2☐ | 3☐ |
| D. Improve your reading skills | 1☐ | 2☐ | 3☐ |
| E. Improve your math skills | 1☐ | 2☐ | 3☐ |
| F. Like school better | 1☐ | 2☐ | 3☐ |
| G. Stay out of trouble | 1☐ | 2☐ | 3☐ |
| H. Stay away from drugs or get off drugs | 1☐ | 2☐ | 3☐ |
| I. Prepare for a job | 1☐ | 2☐ | 3☐ |
| J. Prepare for college or other training | 1☐ | 2☐ | 3☐ |
| K. Earn some money | 1☐ | 2☐ | 3☐ |
| L. Improve your self-confidence | 1☐ | 2☐ | 3☐ |
| M. Save money for college or other training | 1☐ | 2☐ | 3☐ |
| N. Deal with the police and courts | 1☐ | 2☐ | 3☐ |
| O. Learn the value of community service | 1☐ | 2☐ | 3☐ |

E9. Did your Quantum counselor get to know your parent(s) or guardian(s)?

1☐ Yes

2☐ No ➡ **GO TO E11**

E10. Did your Quantum counselor's conversations with your parent(s) or guardian(s) improve your relationship with your parent(s) or guardian(s)?

1☐ Yes

2☐ No

E11. Did other Quantum Associates sometimes help you through difficult times in your life? Quantum Associates are other kids in the Quantum Program.

1☐ Yes

2☐ No

E12. Did other Quantum Associates sometimes help you achieve goals in your life that you might not have achieved without them?

1☐ Yes

2☐ No

E13. Have you received the money in your Quantum accrual account? Your accrual account is the money the program set aside for your education after high school. The program gives you this money after you graduate and start college or some training program.

1☐ Yes

2☐ No ➡ **GO TO E15 ON PAGE 17**

E14. We are interested in learning how your Quantum accrual account has helped you with your future plans. Did you use the money from your Quantum accrual account for any of the following?

*Mark all that apply*

1☐ Tuition payments for school or training program

2☐ Supplies for school or training program

3☐ Rent or other living expenses

4☐ Transportation or moving expenses

5☐ Other *(specify)*

_____

E15. Was there anything that kept you from participating in Quantum as much as you wanted?

1☐ Yes

2☐ No ➡ **GO TO PART F ON PAGE 18**

E16. What were some of the reasons you didn't spend more time/any time participating in Quantum?

*Mark all that apply*

1☐ Busy with sports/other school activities

2☐ Busy working at my job

3☐ Busy taking care of my child

4☐ Busy taking care of other people in my family

5☐ Don't like people at Quantum Program

6☐ Wasn't interested/Quantum was boring/not helpful

7☐ Transportation problems

8☐ Own health problems

9☐ Other *(specify)*

_____

## F. OTHER ACTIVITIES

F1. These next questions are about activities such as crime and drug use. You may not have been involved in these activities, but we need you to answer each question as honestly and completely as you can. A certificate of confidentiality from the federal government protects the privacy of your answers. We are prevented by law from revealing the information you give to anyone else, including the police, courts, or others.

In the **last 3 months**, have you:

| | Yes | No |
|---|---|---|
| A. Sold illegal drugs | 1☐ | 2☐ |
| B. Stolen or tried to steal a motor vehicle such as a car, truck, or motorcycle | 1☐ | 2☐ |
| C. Stolen something other than a motor vehicle or robbed someone | 1☐ | 2☐ |
| D. Attacked and seriously hurt or killed someone | 1☐ | 2☐ |
| E. Carried a hand gun | 1☐ | 2☐ |
| F. Committed sexual assault | 1☐ | 2☐ |

F2. In the **last 3 months**, were you involved in any other illegal activities not mentioned here?

1☐ Yes

2☐ No ➡ **GO TO F4 ON PAGE 19**

F3. What were they?

_____

_____

_____

F4. In the **last 3 months**, have you been arrested or charged with a crime or parole violation?

1☐ Yes

2☐ No ➡ **GO TO F6**

F5. For what were you arrested or charged?

_____

_____

_____

F6. Did your Quantum counselor ever help you deal with the courts, the police, or other aspects of the criminal justice system?

1☐ Yes

2☐ No

F7. The next question is about the use of drugs. In the **past 30 days**, have you:

| | Yes | No |
|---|---|---|
| A. Smoked marijuana or hashish (*This includes pot, reefer, grass, or weed)* | 1☐ | 2☐ |
| B. Used cocaine or crack cocaine | 1☐ | 2☐ |
| C. Used heroin, opium, or methadone | 1☐ | 2☐ |
| D. Used uppers such as amphetamines, methamphetamine, or speed (*This includes ice, crank, crystal, meth, white crosses, black beauties, diet pills, or drugs for which you do not have a prescription such as Benzedrine, Preludin, or Ritalin)* | 1☐ | 2☐ |
| E. Used downers such as barbiturates, sedatives, or hypnotics *(This includes sleeping pills, quaaludes, or drugs for which you do not have a prescription such as Xanax, Darvon, or Percodan)* | 1☐ | 2☐ |
| F. Used any inhalants such as glue, aerosol from Hairspray, or White Out | 1☐ | 2☐ |
| G. Used any hallucinogens such as L.S.D. | 1☐ | 2☐ |

F8. The next question is about drinking alcohol. During the **past 30 days**, on how many days did you have 5 or more drinks in a row, that is, within a couple of hours?

1☐ 0 days

2☐ 1 to 7 days

3☐ 8 to 14 days

4☐ 15 or more days

## G. BACKGROUND

G1. These next questions ask for some general information. In the past six months, did you do any volunteer work?

1☐ Yes

2☐ No

G2. In the past six months, did you receive an honor or award?

1☐ Yes

2☐ No ➡ **GO TO G4**

G3. What was the name of the honor(s) or award(s)?

_____

_____

G4. What is your ethnic background? Are you:

1☐ Hispanic or Latino

2☐ Not Hispanic or Latino

G5. What is your race? Are you:

*Mark all that apply*

1☐ Alaska Native or American Indian

2☐ Asian

3☐ Black or African American

4☐ Native Hawaiian or Other Pacific Islander

5☐ White

G6. What is your sex?

1☐ Male

2☐ Female

G7. What language is spoken most often in your home? If you are no longer in high school, mark the language that was spoken most often when you were in high school.

1☐ English

2☐ Spanish

3☐ Other *(specify)*

_____

G8. These next questions are about the household you lived in most of the time during April 1999. Include everyone who usually lived there, even if they were away from home. How many people lived in your household in April 1999, **not counting yourself?**

*If you were temporarily living away from home in April 1999 (e.g. at college, in the military, or in jail, please answer for the household you lived in when you were not away from home.*

*If you lived alone, mark this box and go to G11 on page 23.* |__|

|__|__| NUMBER OF PEOPLE IN HOUSEHOLD

G9. How many of the people living in your household during April 1999 were your:

*Please enter one number for each*

A. Biological or adoptive mother . . . . . |__|__|
B. Biological or adoptive father . . . . . |__|__|
C. Stepparents . . . . . |__|__|
D. Foster parents . . . . . |__|__|
E. Brothers or sisters . . . . . |__|__|
F. Aunts or uncles or great aunts or great uncles . . . |__|__|
G. Grandparents or great grandparents . . . . . |__|__|
H. Nieces, nephews, or cousins . . . . . |__|__|
I. Your boyfriend or girlfriend . . . . . |__|__|
J. Your husband or wife . . . . . |__|__|
K. Your natural children . . . . . |__|__|
L. Other people related to you . . . . . |__|__|
M. Other people not related to you . . . . . |__|__|

TOTAL |__|__|

G10. CHECKPOINT: Does the total number of people in G9 equal the total you recorded in G8?

1☐ Yes ➡ **CONTINUE**

2☐ No ➡ **PLEASE REVISE YOUR ANSWERS SO THE TOTALS MATCH**

G11. In April 1999, were you or anyone in the household where you lived receiving:

| | Yes | No |
|---|---|---|
| A. Welfare . . . . . | 1☐ | 2☐ |
| B. Food stamps . . . . . | 1☐ | 2☐ |

G12. These next questions are about any children of your own. Did you ever get someone pregnant, or have you ever been pregnant?

1☐ Yes

2☐ No ➡ **GO TO G15**

G13. How many children of your own do you have, including children who do not live with you?

|__|__| NUMBER OF CHILDREN

G14. When was your first child born?

|__|__| |__|__| |__|__|__|__|

MONTH DAY YEAR

G15. How many times have you moved since you started high school, that is since the Fall of 1995?

|__|__| TIMES

## H. CONTACT INFORMATION

We will be mailing you a $10.00 check for completing this questionnaire. You should receive the check 4 to 6 weeks after we receive your questionnaire.

H1. Please indicate the name and address to which you would like the check sent.

NAME _____

ADDRESS _____ APT# _____

CITY _____ STATE |__|__| ZIP |__|__|__|__|__|

H2. In case we need to clarify any of this information, please indicate the best telephone number(s) to reach you in the future.

HOME |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

CELL |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

OTHER |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

H3. Are you planning to move in the near future?

1☐ Yes

2☐ No ➡ **GO TO H8 ON PAGE 27**

H4. Do you know what your future address and phone number will be?

1☐ Yes

2☐ No ➡ **GO TO H8 ON PAGE 27**

H5. What date will the address and phone number be effective?

|__|__|  |__|__|  |__|__|__|__|

MONTH  DAY  YEAR

H6. What will be your future address?

ADDRESS _____ APT# _____

CITY _____ STATE |__|__| ZIP |__|__|__|__|__|

H7. What will be your future telephone number(s)?

HOME |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

CELL |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

OTHER |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

H8. We may contact you again next year to conduct another survey about how you're doing. In case we have trouble reaching you, what is the name, address and phone number of three close relatives or friends who are likely to know your location in the future?

**CONTACT PERSON 1**

NAME _____

ADDRESS _____ APT# _____

CITY _____ STATE |__|__| ZIP |__|__|__|__|__|

HOME |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

CELL |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

OTHER |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

EMAIL _____

RELATIONSHIP TO YOU _____

**CONTACT PERSON 2**

NAME _____

ADDRESS _____ APT# _____

CITY _____ STATE |__|__| ZIP |__|__|__|__|__|

HOME |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

CELL |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

OTHER |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

EMAIL _____

RELATIONSHIP TO YOU _____

**CONTACT PERSON 3**

NAME _____

ADDRESS _____ APT# _____

CITY _____ STATE |__|__| ZIP |__|__|__|__|__|

HOME |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

CELL |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

OTHER |__|__|__| - |__|__|__| - |__|__|__|__|
AREA CODE TELEPHONE NUMBER

EMAIL _____

RELATIONSHIP TO YOU _____

H9. Finally, we would like your permission to collect your school records, including your transcripts, from the high schools that you attended. We will combine your information with that of other people in the study to look at the kinds of classes people took in high school, the kinds of grades they made, and how long they attended high school. This information will be kept strictly confidential and you will not be personally identified. Do you give us permission to collect your school records?

1☐ Yes

2☐ No

**THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!**
**PLEASE PUT IT IN THE ENVELOPE PROVIDED AND MAIL IT.**
**IN CASE YOU LOST THE ENVELOPE, OUR ADDRESS IS:**

Mathematica Policy Research, Inc.
600 Maryland Ave., SW, Suite 550
Washington, DC 20024-2512
Attn: Debbie Reese

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# EXHIBIT C.4

## DOCUMENTS SENT TO HIGH SCHOOLS TO REQUEST TRANSCRIPTS

**Myles Maxfield**
*Senior Fellow*

November 30, 2000

CONTACT NAME
CONTACT TITLE
SCHOOL NAME
SCHOOL ADDRESS

Dear CONTACT NAME:

I am writing to request school records information for XXX students who are currently enrolled in or were enrolled in your school, and who are participating in a national study sponsored by the U.S. Department of Labor and the Ford Foundation.

The Quantum Study was designed by the Department of Labor to evaluate the Quantum Opportunity Program, a program developed to help students graduate from high school and undertake postsecondary education and training. Students who are participating in the Quantum Study are being followed through a number of data collection activities, including school records collection, telephone and in-person surveys, and achievement testing. We are now beginning to collect these students' school records, and would like you to provide transcripts and other information for the students listed in this package.

The purpose of collecting these records is to identify the kinds of courses that the students have taken, their academic progress over time, and their involvement and conduct in high school. We obtained parental consent for the release of these students' school records at the start of the study. For students over the age of 18, we have since obtained consent from the students themselves.

In this package, you will find the following:

- A checklist of instructions for providing the students' transcripts and associated information.
- Forms for identifying the students and recording their information.
- Disclosure notices to be placed in each student's file indicating the purpose for which the school records were released.

- A form for you to request reimbursement for transcript preparation.

- An addressed, postage-paid envelope for returning the materials.

Mathematica Policy Research, Inc. has been authorized by the Department of Labor to collect this information. The privacy of the information you provide is protected under the Privacy Act of 1974. Under penalty of law, records on individuals must be kept confidential by Mathematica. Data will be reported only in the form of statistical summaries.

We estimate that the requested information for each student will take your office approximately 10 minutes to prepare. If you have any comments regarding this burden estimate or any other aspects of this collection of information, including suggestions for reducing burden, please send them to the Office of Information Management, Department of Labor, Room N-1301, 200 Constitution Avenue, NW, Washington, DC 20210 and the Office of Management and Budget, Paperwork Reduction Project (1205-0397), Washington, D.C. 20503.

We would appreciate the return of the requested materials by **December 31, 2000.**

If you have any questions, please do not hesitate to call Mathematica's Data Collection Manager, Julie Johnson at 1-888-535-0283 (toll-free).

Sincerely,

Myles Maxfield

OMB No: 1205-0397
Expires: 11/30/2001

# Student Record Collection Checklist
# Quantum Study

**School Name:** _____

**Number of records requested:** |__|__|__|

**PLEASE FOLLOW THE STEPS BELOW AND PROVIDE THE INFORMATION REQUESTED.**

## STEP 1 — PROVIDE TRANSCRIPTS

Please provide a transcript for each student listed on the enclosed Student Record Forms. There is one student listed per form. These students are participants in the Quantum Study. The Student Record Forms provide information to help you correctly identify each student. We need the transcript even if the student is not currently attending your school, never graduated, or transferred to another school. It is not necessary for the transcript to bear an official seal.

On the Student Record Form, please indicate if you provided a transcript for that student. Attach the transcript to the Student Record Form.

## STEP 2 — PROVIDE THE NUMBER OF SUSPENSIONS/EXPULSIONS

On the Student Record Form, please provide the number of times each student was ever suspended from this high school, and indicate if the student was ever expelled from this high school.

**Did you provide the number of suspensions and expulsions for every student?**

- ☐ **Yes**
- ☐ **No**

**If you were not able to provide this information, please write the reason.**

_____

_____

## STEP 3 — PROVIDE THE NUMBER OF DAYS ABSENT

On the Student Record Form, please enter the number of days each student was absent from school *during the last school year* that he/she attended.

**To help us analyze the data, how many days are in your school year?**

**|__|__|__| Number of days in school year**

**Did you provide the number of days absent for every student?**

- ☐ **Yes**
- ☐ **No**

**If you were not able to provide this information, please write the reason.**

_____

_____

## STEP 4 — PROVIDE A COURSE CATALOG OR COURSE LIST, AND A LIST OF VOCATIONAL EDUCATION COURSES

Provide a copy of your school's course catalog or other list of courses. In addition, provide a list of vocational education courses that are offered by your school. This will help us interpret and accurately code the course information on the student transcripts.

**Did you provide a course catalog or course list?**

- ☐ **Yes**
- ☐ **No**

**Did you provide a list of vocational education classes?**

- ☐ **Yes**
- ☐ **No**

**If you were not able to provide these items, please explain why and provide an alternate source for this information.**

_____

_____

## STEP 5 — PROVIDE GRADE DESCRIPTIONS

To help us interpret and uniformly code the grades designated on the transcripts, please include a copy of your school's grading system. This description should include the highest and lowest grades on the grading scale.

**Did you provide a description of your school's grading system?**

- ☐ **Yes**
- ☐ **No**

**If you were not able to provide this description, please write the reason.**

_____

_____

## STEP 6 — PROVIDE YOUR NAME AND TELEPHONE NUMBER

Please provide your name and telephone number so that we may contact you for clarification if necessary.

**Name:** _____ **Title:** _____

**Telephone Number:** (____)_____

**THANK YOU FOR YOUR HELP IN COMPLETING THIS CHECKLIST!**

**In the postage-paid envelope provided, please return this checklist along with the transcripts, student record forms, course catalog, vocational education course list, and grading system description to:**

Ms. Julie Johnson
Mathematica Policy Research
600 Maryland Ave., SW, Suite 550
Washington, DC 20024-2512
1-888-535-0283

# Student Record Form
# Quantum Study

## Student Identification

High School:

Student Identification #:

Student Name:

Student Date of Birth :

## Student Information Requested

1. Is a transcript provided for this student?

   ☐ Yes
   ☐ No

2. If no transcript is provided, please write the reason (for example, unable to identify student, student did not attend, etc.)

   _____

   _____

3. How many times was this student ever suspended from this high school? Please include in-school and out-of-school suspensions.

   ☐☐ Times suspended

4. Was this student ever expelled from this high school?

   ☐ Yes
   ☐ No

5. How many days was this student absent in the last school year that he/she attended?

   ☐☐☐ Days absent

**STATEMENT OF CONSENT**
**SCHOOL RECORDS COLLECTION**
**QUANTUM STUDY**

To ensure that the Quantum study provides a thorough and complete picture of the experiences of young people, we would like your permission to obtain your high school transcript. The transcript information will be used to describe such things as the kinds of courses young people take in high school, the grades they receive, and the number of days they attended.

The information will be kept strictly confidential. It will be combined with information about a large number of students, and you will not be identified in any way.

Participation in this transcript collection is voluntary, but the quality of the study will be higher if you give your consent. To give your consent, please sign below and return this form to a representative from Mathematica Policy Research.

---

*I have read the information above and understand that as part of the Quantum Study, information will be collected from my school records. I understand that all information will be confidential and used for research purposes only. By signing this form, I am giving consent for my school records to be used in this study.*

Your Name (Please Print)

_____

Your Signature

_____ Date _____

Street Address _____ City _____ State _____ ZIP _____

Telephone _____ (If you have no phone, please give a phone number of a friend or relative where messages can be left).

# DISCLOSURE NOTICE
## QUANTUM STUDY

Date:_____

A copy of this student's transcript has been provided to Mathematica Policy Research, Inc., agent for the U.S. Department of Labor, for evaluation of the Quantum Opportunity Program Demonstration.

The evaluation of the Quantum Opportunity Program Demonstration, sponsored by the U.S. Department of Labor, is designed to monitor the academic success of students enrolled in the Quantum program, and to compare their academic progress with comparable students not participating in the Quantum program. This information will be used to help evaluate and improve the effectiveness of the Quantum Opportunity Program.

# Transcript Reimbursement Form
# Quantum Study

**School Name:** _____

**Mailing Address:** _____

**City, State:** _____ **ZIP**_____

**NUMBER OF TRANSCRIPTS PROVIDED:** _____

**COST PER TRANSCRIPT: $**_____

**TOTAL REIMBURSEMENT REQUESTED: $**_____

_____ _____

**Signature of Registrar or Administrative Officer** **Date**

Please use the enclosed, postage-paid envelope to return this form with the other information you are providing. One copy will be returned to you with your payment. If you need further information regarding reimbursement or any other aspect of this request, please call Julie Johnson at 1-888-535-0283.

---

## FOR MPR USE ONLY

Approved by: _____ Date: _____ Amount $_____

Check #_____ Date: _____

# APPENDIX D

## OUTCOMES AND SUBGROUPS

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

This appendix describes the outcomes and subgroups of enrollees for which we estimated impacts.

## OUTCOMES

The outcomes fall into five broad categories:

1. *High School Performance.* The outcomes in this category include reading and mathematics achievement test scores, grade point average (GPA), credits earned, and suspensions or expulsions from high school.

2. *High School Completion.* The outcomes in this category measure receipt of a high school diploma or receipt of a general educational development (GED) certificate. They also measure whether a youth was still attending high school.

3. *Postsecondary Activity.* The outcomes in this category measure engagement in postsecondary education and training activities through college, vocational/technical schools, certified apprenticeship programs, and the armed forces. They also measure employment.

4. *Risky Behaviors.* The outcomes in this category measure substance abuse, gang activity, criminal activity, involvement with the criminal justice system, sexual activity, and childbearing.

5. *Risk and Resiliency Factors.* The outcomes in this category measure whether there are factors in a youth's social environment that increase the likelihood that the youth will achieve the goals of QOP. Having a caring adult mentor is an example of a factor that may improve a youth's resiliency to negative influences.

Table D.1 displays the complete list of outcomes by category, and indicates the source of data for each outcome. Most of the outcomes are self-explanatory, although several require additional explanation, which is presented below. In several categories, outcomes are listed in order from narrowest to broadest. For example, outcomes in the high school completion category begin with earning a high school diploma as the narrowest and most difficult to achieve. The second outcome broadens the first outcome to include earning a GED certificate. The final outcome in the category is the most inclusive and the easiest to achieve.

### High School Performance

Credits reflect the number of courses completed (with a passing grade) and the amount of class time required to complete courses. Credits are expressed in Carnegie units. One Carnegie unit corresponds to a class that meets for 45 to 60 minutes every day of the week for a whole academic year. Core academic credits are the number of Carnegie units in mathematics, science, English, social studies, and foreign language classes.

TABLE D.1

OUTCOMES

| Category |
|---|
| **High School Completion** |
| **From Telephone Survey and High School Transcripts** |
| Received high school diploma[a] |
| Received high school diploma or GED[a] |
| Received high school diploma or GED or was still in high school[a] |
| Received high school diploma or GED or was still in high school or was taking a GED course[a] |
| **High School Performance** |
| **From Achievement Tests** |
| Math achievement test score, percentile[a] |
| Reading achievement test score, percentile[a] |
| **From High School Transcripts** |
| Cumulative GPA, on a scale from 0 to 4[a] |
| Math/Science GPA, on a scale from 0 to 4[a] |
| Total Credits, Carnegie units[a] |
| Core Academic Credits, Carnegie units[a] |
| Math/Science/English Credits, Carnegie units |
| **From Telephone Survey** |
| Ever suspended for disciplinary reasons |
| Ever expelled for disciplinary reasons |
| **From In-Person Survey** |
| Suspended or expelled in the last 12 months |
| **Postsecondary Activities** |
| **From Telephone Survey** |
| Attending a four-year college |
| Attending a two- or four-year college |
| Attending college or enrolled in vocational/technical school or apprenticeship or armed forces ( = postsecondary training) |
| Postsecondary training or working at a good job[a] |
| Postsecondary training or working at any job |
| Postsecondary training or attending high school |
| Postsecondary training or attending high school or a GED course |
| Postsecondary training or attending high school or a GED course or working at a good job[a] |

TABLE D.1 *(continued)*

| Category |
|---|
| Postsecondary training or attending high school or a GED course or working at any job |
| Attending or accepted into a four-year college |
| Attending or accepted into a two- or four-year college |
| Attending or accepted into college or enrolled in vocational/technical school or apprenticeship or armed forces ( = postsecondary training) |
| Postsecondary training (includes attending or accepted into college)or working at a good job[a] |
| Postsecondary training (includes attending or accepted into college)or working at any job |
| Postsecondary training (includes attending or accepted into college)or attending high school |
| Postsecondary training (includes attending or accepted into college)or attending high school or a GED course |
| Postsecondary training (includes attending or accepted into college)or attending high school or a GED course or working at a good job[a] |
| Postsecondary training (includes attending or accepted into college)or attending high school or a GED course or working at any job |
| Attending, accepted, or applied to a college |
| Attending, accepted, or applied to a college or enrolled in vocational/technical school or apprenticeship or armed forces ( = postsecondary training) |
| Postsecondary training (includes attending, accepted, or applied to a college)or working at a good job[a] |
| Postsecondary training (includes attending, accepted, or applied to a college)or working at any job |
| Postsecondary training (includes attending, accepted, or applied to a college)or attending high school |
| Postsecondary training (includes attending, accepted, or applied to a college)or attending high school or a GED course |
| Postsecondary training (includes attending, accepted, or applied to a college)or attending high school or a GED course or working at a good job[a] |
| Postsecondary training (includes attending, accepted, or applied to a college)or attending high school or a GED course or working at any job |
| **Risky Behaviors** |
| **Substance Abuse** |
| **From In-Person Survey** |
| Drinking in the past 30 days[a] |
| Frequent drinking in the past 30 days[a] |
| Binge drinking in the past 30 days[a] |
| Frequent binge drinking in the past 30 days[a] |
| Drunk or high in school in the past 12 months |
| Used any illegal drug in the past 30 days[a] |
| **From Telephone Survey** |
| Binge drinking in past 30 days[a] |
| Frequent drinking in the past 30 days[a] |
| Used any illegal drug in the past 30 days[a] |
| **Gang Activity** |
| **From In-Person Survey** |
| Involved in gang fight in prior year |
| Ever a member of a gang |
| Currently a member of a gang |

TABLE D.1 *(continued)*

| Category |
|---|
| **Criminal Activity** |
| **From In-Person Survey** |
| Committed any crime in the past 12 months[a] |
| **From Telephone Survey** |
| Committed any crime in the past 3 months[a] |
| **Involvement with the Criminal Justice System** |
| **From In-Person Survey** |
| Ever arrested or charged with a crime or parole violation |
| **From Telephone Survey** |
| Arrested or charged with a crime or parole violation in the past 3 months |
| **Sexual Activity and Childbearing** |
| **From In-Person Survey** |
| Ever had sex |
| Did not use condom last time had sex |
| Taught about HIV/AIDS |
| **From Telephone Survey** |
| Ever pregnant or get anyone pregnant |
| Have had a child |
| **Resiliency Factors** |
| **Influential Adult** |
| **From In-Person Survey** |
| There is an influential adult in my life[a] |
| Influential adult pays attention to and respects my ideas and feelings about things in my life[a] |
| Influential adult has helped me learn things that have helped me do well in my life[a] |
| Influential adult has helped me take advantage of opportunities to get ahead in my life[a] |
| Influential adult has recognized and appreciated the things I have done well in my life[a] |
| Influential adult has clear expectations and standards about what I do with my life[a] |
| Influential adult has shown me that fighting is not a good way of solving problems in my life[a] |
| Influential adult has shown me that breaking the law does not help me achieve my goals[a] |
| Influential adult has shown me that using drugs or alcohol is not a good way of solving problems in my life[a] |
| Influential adult has had any of these influences[a] |
| **Special Programs** |
| **From In-Person Survey** |
| Participated in a special program to help students[a] |
| Program helped me improve my grades[a] |
| Program helped me stay away from drugs or get off drugs[a] |

TABLE D.1 *(continued)*

| Category |
|---|
| Program helped me stay out of trouble[a] |
| Program helped me deal with the police and courts[a] |
| Program helped me prepare for college[a] |
| Program helped me earn and save money[a] |
| Program helped in any of these ways[a] |
| **Attitudes Toward Risky Behaviors** |
| **From In-Person Survey** |
| Using drugs or alcohol frequently is always wrong[a] |
| Committing crimes is always wrong[a] |
| Having a baby while a teenager is always wrong[a] |
| Dropping out of school is always wrong[a] |
| All of the above activities are always wrong[a] |
| **Outlook on Life** |
| **From In-Person Survey** |
| Disagree that bad things happen to people like me[a] |
| Disagree that my life will be unhappy[a] |
| Disagree that I do not like the way I look[a] |
| Disagree that I will probably die before I'm thirty[a] |
| Disagree with all of the above four statements[a] |

[a] A more detailed explanation of how this outcome was measured can be found in the text of the appendix.

The reading and mathematics achievement test outcomes are expressed as percentiles in the distribution of scores among a national sample of tenth graders in 1990. For example, a sample member at the 47th percentile had a test score that was higher than 47 percent of the national population of tenth graders in 1990 and lower than 52 percent of tenth graders. QOP sample members were tested in the spring of the fourth academic year of the demonstration, when they should have been in the second semester of the twelfth grade. Percentiles were computed in terms of the population of tenth graders, rather than of twelfth graders. The Educational Testing Service (ETS) scored both achievement tests.

**High School Completion**

Data on high school completion were from the telephone survey and from transcripts. In the telephone survey, we asked sample members whether they had completed a high school degree or a GED. Those who answered yes to this question were then asked whether they had earned a high school diploma. In collecting transcripts, we discovered that most of the 11 QOP schools recorded high school graduation status on students' transcripts. The exceptions were Eastern High School in Washington, D.C., which did not report graduation status at all, and Benjamin Franklin High School in Philadelphia, Pennsylvania, which reported the minimum number of credits required to graduate rather than the graduation status for each student.

Using data from both the telephone survey and the transcripts, we constructed outcomes measuring high school graduation status at the time of the survey. Of the 892 respondents to the telephone survey:

- 659 reported a high school graduation status that was consistent with their transcript.
- 126 reported a high school graduation status, but we were unable to obtain their transcripts.
- 4 did not answer the survey question on high school graduation status, but graduation status was recorded on their transcripts.
- 103 reported a high school graduation status that was inconsistent with their transcript. Of these:
  - 84 reported that they had graduated, but their transcripts did not indicate that they had graduated.
  - 19 reported that they had not graduated, but their transcripts indicated that they had graduated.

In 64 of the 103 cases with inconsistencies, a close examination of the transcripts and the credits earned enabled us to reconcile the inconsistency. For the remaining 39 cases, the evidence from the transcript was not conclusive, and we gave the youth the benefit of the doubt, using the self-reported graduation status when constructing the outcomes pertaining to high school completion.

**Postsecondary Activity**

A "good" job offers employer-sponsored health insurance.

**Risky Behaviors**

**Substance Abuse.** "Binge" drinking means drinking five or more drinks in a row. Drinking or binge drinking is classified as "frequent" if it occurs on at least 8 out of the past 30 days. The outcome "used any drug in the past 30 days" indicates that the respondent reported using at least one of the following illegal drugs or types of illegal drugs: marijuana or hashish; cocaine or crack cocaine; heroin, opium, or methadone; stimulants; depressants; inhalants; or hallucinogens. Because the rates at which sample members were using most of the individual drugs were low and the evaluation samples for schools and sites were small, impacts could not be reliably estimated by calculating differences of means. Thus, we do not present impact estimates for individual drugs.

**Criminal Activity.** The outcomes "committed any crime in the past 12 months" and "committed any crime in the past 3 months" indicate that the respondent reported committing at least one of the following seven crimes: (1) sold illegal drugs, (2) stole a motor vehicle, (3) stole something other than a motor vehicle, (4) attacked and seriously hurt or killed someone, (5) carried a hand gun, (6) committed a sexual assault, or (7) committed any other illegal activity. Because the rates at which sample members were committing most of the individual crimes were low and the evaluation samples for schools and sites were small, impacts could not be reliably estimated by calculating differences of means. Thus, we do not present impact estimates for individual crimes.

**Resiliency Factors**

**Positive Influence of a Caring Adult.** We defined a caring adult as "any adult, besides a family member, who positively influenced your life in some significant way, for example, a teacher, counselor, coach or minister." We asked those who indicated that they were influenced by such a person whether each of the following statements were definitely true, mostly true, mostly not true, or definitely not true:

- The person pays attention to and respects my ideas and feeling about things in my life.
- The person has helped me learn things that have helped me do well in my life.
- The person has helped me take advantage of opportunities to get ahead in my life.
- The person has recognized and appreciated the things I have done well in my life.
- The person has clear expectations and standards about what I do with my life.
- The person has shown me that fighting is not a good way of solving problems in my life
- The person has shown me that breaking the law does not help me achieve my goals.
- The person has shown me that using drugs or alcohol is not a good way of solving problems in my life.

We calculated the percentages of QOP-group and control-group members who reported that each statement was definitely true. The base of these percentages was the entire QOP group or the entire control group, including those who were not influenced by a caring adult.

**Positive Influence of a Social Program.** We asked sample members whether they participated in a social program that had a positive influence on their lives. The interviewer first announced that she was going to ask about "social programs other than your normal high school classes. These programs try to help students stay in school, make good grades, stay away from drugs, prepare for work or college, and make good decisions in life." Those who said they participated in such a program since the ninth grade were asked, "How much did the program help you in the following ways?" Responses included "a lot", "a little," or "not at all."

- Improve your grades
- Stay away from drugs or get off drugs
- Stay out of trouble
- Deal with the police and courts
- Prepare for college
- Earn and save money

We calculated the percentages in the QOP and control groups who reported participating in such a program and the percentages being helped a lot by such a program in each of the listed dimensions. The base of these percentages was the entire QOP group or the entire control group, including those who did not participate in such a program.

**Attitudes Toward Risky Behaviors and Outlook on Life.** We measured sample members' attitudes toward risky behaviors by asking whether the youth thought each of the following was always wrong, sometimes wrong, or not wrong:

- Using drugs or alcohol frequently
- Committing crimes such as stealing, assaulting someone, or selling drugs
- Having a baby while you are a teenager
- Dropping out of school

We calculated the percentages of the QOP and control groups reporting that the risky behaviors were always wrong.

We measured sample members' outlook on life by asking whether the youth agreed with each of the following statements. Responses included "strongly disagree," "disagree," "agree," and "strongly agree."

- Bad things happen to people like me.
- I'm afraid my life will be unhappy.
- I like the way I look.

- I'll probably die before I'm thirty.

We calculated the percentages of the QOP and control groups who disagreed or strongly disagreed with the first, second, and fourth statements and the percentages who agreed or strongly agreed with the third statement.

## SUBGROUPS

In Chapter VII, we present impacts for subgroups defined by two classification schemes. The first scheme classified sample members by baseline characteristics—sex, age, and GPA. The second scheme classified them by location—each of the seven demonstration sites and Ford-funded sites versus DOL-funded sites. Table D.2 lists the subgroups.

When assessing impacts for the subgroups defined by rank in the baseline grade distribution, it is important to remember that to be eligible for QOP, a youth had to be in the bottom two-thirds of the grade distribution based on grades from the eighth grade. Thus, youth in the bottom third of the baseline grade distribution for QOP eligibles were at or below the 22$^{nd}$ percentile in the distribution for all youth, including those who were not eligible for QOP based on their grades. Likewise, the youth in the middle and top thirds of the baseline grade distribution for QOP eligibles were between the 22$^{nd}$ and 44$^{th}$ percentiles and between the 44$^{th}$ and 66$^{th}$ percentiles, respectively, in the grade distribution for all youth.

TABLE D.2

SUBGROUPS

| Subgroup |
| --- |
| Classification According to Baseline Characteristics |
| Sex |
| Males |
| Females |
| Age when entered ninth grade |
| 14 or younger |
| Over 14 |
| Rank in baseline grade distribution (based on eighth-grade GPA) |
| In the bottom third of the grade distribution |
| In the middle third of the grade distribution |
| In the top third of the grade distribution |
| Classification According to Location |
| Site |
| Fort Worth |
| Cleveland |
| Washington, D.C. |
| Houston |
| Memphis |
| Philadelphia |
| Yakima |
| Funding Source |
| DOL |
| The Ford Foundation |

# APPENDIX E

# WEIGHTING, IMPACT ESTIMATION, AND VARIANCE ESTIMATION

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

## WEIGHTING TO ADJUST FOR NONRESPONSE

We developed person-level weights to adjust for the potential effects of unit nonresponse. Unit nonresponse occurred, for example, when a sample member did not respond at all to the telephone survey, that is, the sample member did not answer any questions on the survey.[1] About 16 percent of sample members did not respond to the in-person survey or take the achievement tests. About 17 percent did not respond to the telephone survey, and no transcript data at all were obtained for 18 percent of sample members. For each data collection activity, the unit nonresponse rate for the control group was higher than the overall rate, while the unit nonresponse rate for enrollees was lower than the overall rate. The difference between the unit nonresponse rates for the two groups was about seven or eight percentage points for each data collection activity.

As documented below, respondents and nonrespondents did not have identical baseline characteristics. Such differences could potentially cause differences between the outcomes of respondents and those of nonrespondents. In such a circumstance, an impact estimated using data from respondents only (since there are no outcome data from nonrespondents) would be a biased estimate of the impact that we seek, which is the impact on all sample members, respondents and nonrespondents. The size of the bias is not estimable.

To adjust for the effects of nonresponse and reduce potential nonresponse bias, we assigned weights to respondents. We assigned larger weights to the respondents who more closely resembled the nonrespondents in terms of baseline characteristics and smaller weights to the respondents who less closely resembled the nonrespondents.[2] Although differential weighting of respondents tended to increase the variances of impact estimates (by measurable amounts), we accepted small increases in variances to enhance our confidence that we controlled nonresponse bias to the extent possible.

### Baseline Differences Between Respondents and Nonrespondents

We analyzed differences between respondents and nonrespondents separately for each of the data collection activities. Because only a very few sample members completed the in-person survey but not the achievement tests or vice versa, we have treated those two activities as a single activity for the purposes of analyzing patterns of nonresponse and developing weights to adjust for nonresponse.[3]

[1] In contrast, item nonresponse occurred when a sample member did not provide a valid answer to a question that was asked even though he or she answered other questions on the survey. As shown in Appendix C, item nonresponse rates were typically very low.

[2] As described in detail below, we evaluated resemblance using response propensity scores.

[3] We treated a sample member as an in-person survey/achievement tests unit nonrespondent only if the sample member did not complete the survey and the tests. If a sample member completed either the survey or the tests, the sample member was treated as a respondent with, potentially, item nonresponse that was as extensive as the whole survey or both tests (in just a few instances).

Table E.1 compares the baseline characteristics of respondents to the in-person survey and achievement tests with the baseline characteristics of all sample members—respondents and nonrespondents combined—for the control group and for the QOP group. We have indicated in the table which differences in baseline characteristics were statistically significant.[4] Tables E.2 and E.3 compare respondents to the telephone survey and school transcripts, respectively, with all sample members.

According to Table E.1, 50 percent of QOP enrollees who responded to the in-person survey and achievement tests were male. In contrast, 52 percent of all QOP enrollees were male. The difference was statistically significant. Table E.2 shows a similar pattern for the telephone survey, implying that males were less likely than females to respond to either of our surveys. According to Tables E.1 and E.2, older youth and youth in the bottom third of the grade distribution generally had lower response rates to our surveys than younger youth and youth with higher grades, although differences were not always significant.

Table E.3 indicates that the patterns of nonresponse for transcripts were broadly similar to the patterns of nonresponse for the surveys.[5] However, for transcripts, there were more significant differences pertaining to sample members' schools, reflecting the direct role of schools in providing transcripts.

## Weights

We corrected for the possibility of nonresponse bias by weighting each sample member. To derive weights, we estimated three separate logit regression models to predict the probabilities that each sample member was a respondent. We repeated this process for (1) the in-person survey and achievement tests, (2) the telephone survey, and (3) the school transcripts. Using the three estimated models, we obtained three sets of weights. Then, we estimated the impact on an outcome using the weight associated with the source of data on that outcome. For example, the impact on an outcome measured in the telephone survey was based on weights that adjusted for telephone survey nonresponse.

We derived each set of weights by carrying out the following four steps:

1. ***We estimated a "best" logit model for predicting response propensity scores (probabilities).*** The best regression model included 22 predictors that we "forced" into the model and additional predictors that we selected using an automated forward selection procedure with a liberal inclusion criterion.[6] The predictors forced into the

[4] The test statistic pertaining to a difference between respondents and all sample members is the same as the test statistic pertaining to a difference between respondents and nonrespondents.

[5] A sample member was classified as a unit nonrespondent for transcripts if we received no transcript data at all for that sample member. Otherwise, the sample member was a respondent with, potentially, item nonresponse. The patterns of nonresponse for surveys and transcripts were similar because we had to use the telephone survey to obtain a sample member's permission to request his or her transcript if the sample member was at least 18 years old, as most sample members were when transcripts were collected.

[6] Our model selection procedure first estimated coefficients for the predictors forced into the model. Then, the procedure determined which excluded predictor had the largest adjusted chi-squared statistic for inclusion in the model. If the statistic was significant at the 75 percent confidence level, the procedure added the predictor to the model. The procedure never removed a predictor from the model. The procedure continued evaluating and adding excluded predictors until there was no excluded predictor that satisfied the criterion for inclusion.

TABLE E.1

THE BASELINE CHARACTERISTICS OF RESPONDENTS TO THE IN-PERSON SURVEY AND ACHIEVEMENT TESTS COMPARED WITH THE BASELINE CHARACTERISTICS OF ALL SAMPLE MEMBERS
(Percentages)

| | QOP Group | | Control Group | |
|---|---|---|---|---|
| Baseline Characteristic | Respondents | Respondents and Nonrespondents | Respondents | Respondents and Nonrespondents |
| Male | 50††† | 52 | 54 | 56 |
| Age when entering ninth grade | | | | |
| < 14 | 12††† | 11 | 12 | 11 |
| 14 | 55†† | 53 | 59† | 57 |
| > 14 | 33††† | 36 | 29†† | 31 |
| Black | 68 | 68 | 69 | 68 |
| Hispanic | 26 | 26 | 26 | 26 |
| Rank based on eighth-grade GPA | | | | |
| Bottom third | 37 | 37 | 32†† | 34 |
| Middle third | 31 | 31 | 35 | 36 |
| Top third | 32 | 32 | 34††† | 30 |
| School | | | | |
| Paschal (Fort Worth) | 17 | 17 | 15 | 16 |
| Collinwood (Cleveland) | 17 | 17 | 12 | 12 |
| Eastern (Washington, D.C.) | 7 | 7 | 9 | 9 |
| Anacostia (Washington, D.C.) | 7 | 7 | 6 | 7 |
| Yates (Houston) | 9 | 9 | 8 | 9 |
| Austin (Houston) | 7 | 9 | 10 | 9 |
| Hillcrest (Memphis) | 7 | 7 | 7 | 8 |
| Hamilton (Memphis) | 4 | 5 | 6 | 6 |
| Carver (Memphis) | 6 | 6 | 8 | 7 |
| Franklin (Philadelphia) | 9 | 9 | 10 | 9 |
| Davis (Yakima) | 8 | 9 | 9 | 10 |
| Sample Size | 510 | 580 | 391 | 489 |

SOURCE: Baseline database, in-person survey, and achievement tests.

† Significantly different from nonrespondents at the 90% confidence level, two-tailed test
†† Significantly different from nonrespondents at the 95% confidence level, two-tailed test
††† Significantly different from nonrespondents at the 99% confidence level, two-tailed test

TABLE E.2

THE BASELINE CHARACTERISTICS OF RESPONDENTS TO THE TELEPHONE SURVEY COMPARED WITH THE BASELINE CHARACTERISTICS OF ALL SAMPLE MEMBERS
(Percentages)

| | QOP Group | | Control Group | |
|---|---|---|---|---|
| Baseline Characteristic | Respondents | Respondents and Nonrespondents | Respondents | Respondents and Nonrespondents |
| Male | 51† | 52 | 55 | 56 |
| Age when entering ninth grade | | | | |
| < 14 | 12†† | 11 | 11 | 11 |
| 14 | 54 | 53 | 59 | 57 |
| > 14 | 35† | 36 | 30 | 31 |
| Black | 69 | 68 | 65††† | 68 |
| Hispanic | 25 | 26 | 29††† | 26 |
| Rank based on eighth-grade GPA | | | | |
| Bottom third | 37 | 37 | 31††† | 34 |
| Middle third | 31 | 31 | 37 | 36 |
| Top third | 32 | 32 | 32††† | 30 |
| School | | | | |
| Paschal (Fort Worth) | 17 | 17 | 16 | 16 |
| Collinwood (Cleveland) | 17 | 17 | 13 | 12 |
| Eastern (Washington, D.C.) | 8†† | 7 | 8 | 9 |
| Anacostia (Washington, D.C.) | 7 | 7 | 4††† | 7 |
| Yates (Houston) | 9 | 9 | 8 | 9 |
| Austin (Houston) | 9 | 9 | 10 | 9 |
| Hillcrest (Memphis) | 7 | 7 | 7 | 8 |
| Hamilton (Memphis) | 4 | 5 | 5 | 6 |
| Carver (Memphis) | 6 | 6 | 7 | 7 |
| Franklin (Philadelphia) | 8 | 9 | 9 | 9 |
| Davis (Yakima) | 8 | 9 | 11 | 10 |
| Sample Size | 503 | 580 | 389 | 489 |

SOURCE: Baseline database and telephone survey.

† Significantly different from nonrespondents at the 90% confidence level, two-tailed test
†† Significantly different from nonrespondents at the 95% confidence level, two-tailed test
††† Significantly different from nonrespondents at the 99% confidence level, two-tailed test

TABLE E.3

THE BASELINE CHARACTERISTICS OF RESPONDENTS TO THE SCHOOL RECORDS DATA COLLECTION COMPARED WITH THE BASELINE CHARACTERISTICS OF ALL SAMPLE MEMBERS
(Percentages)

| | QOP Group | | Control Group | |
|---|---|---|---|---|
| Baseline Characteristic | Respondents | Respondents and Nonrespondents | Respondents | Respondents and Nonrespondents |
| Male | 50†† | 52 | 53†† | 56 |
| Age when entering ninth grade | | | | |
| < 14 | 11 | 11 | 12† | 11 |
| 14 | 56††† | 53 | 60†† | 57 |
| > 14 | 33††† | 36 | 27††† | 31 |
| Black | 66†† | 68 | 69 | 68 |
| Hispanic | 28††† | 26 | 27 | 26 |
| Rank based on eighth-grade GPA | | | | |
| Bottom third | 36 | 37 | 30††† | 34 |
| Middle third | 31 | 31 | 36 | 36 |
| Top third | 33† | 32 | 34††† | 30 |
| School | | | | |
| Paschal (Fort Worth) | 19†† | 17 | 16 | 16 |
| Collinwood (Cleveland) | 14††† | 17 | 11 | 12 |
| Eastern (Washington, D.C.) | 8††† | 7 | 10†† | 9 |
| Anacostia (Washington, D.C.) | 7† | 7 | 6 | 7 |
| Yates (Houston) | 9† | 9 | 8 | 9 |
| Austin (Houston) | 10 | 9 | 10 | 9 |
| Hillcrest (Memphis) | 6 | 7 | 8 | 8 |
| Hamilton (Memphis) | 4†† | 5 | 4† | 6 |
| Carver (Memphis) | 6 | 6 | 7 | 7 |
| Franklin (Philadelphia) | 8 | 9 | 9 | 9 |
| Davis (Yakima) | 9 | 9 | 9 | 10 |
| Sample Size | 495 | 580 | 376 | 489 |

SOURCE: Baseline database and transcripts.

† Significantly different from nonrespondents at the 90% confidence level, two-tailed test
†† Significantly different from nonrespondents at the 95% confidence level, two-tailed test
††† Significantly different from nonrespondents at the 99% confidence level, two-tailed test

model were an intercept, 10 school indicators, a QOP/control indicator, and the 10 interactions between the QOP/control indicator and the 10 school indicators. Additional potential predictors included the following baseline characteristics: an indicator for being male, an indicator for being black, an indicator for being Hispanic, two indicators for age when entering ninth grade (one for under 14 and one for over 14), two indicators for rank based on eighth-grade GPA (one for middle third and one for top third), percentile rank based on eighth-grade GPA, and the percentile rank squared. Other potential predictors included the interactions between any two baseline characteristics (except for interactions between the predictors based on eighth-grade GPA), the interactions between any baseline characteristic and the QOP/control indicator, and the interactions between any baseline characteristic and any school indicator. An exception to this was that the indicators for race and Hispanic origin were interacted with the school indicators for only the two schools with substantial diversity by race or Hispanic origin (Paschal in Fort Worth and Davis in Yakima).

2. ***We derived predicted response propensity scores based on sample members' characteristics using the best logit model.***

3. ***We assigned a weight to a respondent equal to the inverse of the respondent's propensity score.*** We assigned a weight equal to zero to each nonrespondent. To reduce the variability in weights and the resulting increase in variance of impact estimates, we trimmed weights to 2.5, that is, any weight greater than 2.5 was set equal to 2.5.[7] Weighting respondents based on inverse propensity scores ensured that we assigned a relatively large weight to a respondent who had a relatively low response propensity and, thus, resembled a nonrespondent.

4. ***We ratio adjusted weights to sum to the number of respondents in each of the 22 weighting classes defined by the cross-classification of school (11 categories) and experimental group (2 categories—QOP and control).***

Having developed these weights, we estimated an impact as the difference between the *weighted* QOP-group mean and the *weighted* control-group mean. The details of the estimation of impacts and the variances of those impacts are presented in the next section.[8]

## ESTIMATING IMPACTS AND VARIANCES OF IMPACTS

### Impacts for Schools

We estimated the impact for a school according to:

$$impact_{school} = \bar{X}_{Q,school} - \bar{X}_{C,school}$$

[7] This resulted in the trimming of none of the weights that adjusted for in-person survey/achievement tests nonresponse, five of the weights that adjusted for telephone survey nonresponse, and nine of the weights that adjusted for transcript nonresponse.

[8] Comparing impacts derived from unweighted means (not presented in this report) with the impacts derived from weighted means revealed that the estimated impacts and our conclusions based on them are not sensitive to whether weights are used.

where $X$ is the outcome of interest, $Q$ and $C$ denote the QOP and control groups, and, for example:

$$\bar{X}_{Q,school} = \frac{\sum_{i \in Q,school} w_i X_i}{\sum_{i \in Q,school} w_i}$$

$w_i$ is the weight for youth $i$.[9] In other words, we estimated the impact for a school by subtracting the mean outcome among youth in the control group for that school from the mean outcome among QOP enrollees for that school, as described in the main text. Each youth remained a member of the group to which he or she was originally assigned, regardless of subsequent behavior, such as transferring to another school, dropping out of school, or (for enrollees) dropping out of QOP.

Treating the QOP group and the control group as independent samples from a superpopulation, we estimated the variance (the standard error squared) of the school-level impact according to:[10]

$$\text{var}\left(impact_{school}\right) = \text{var}\left(\bar{X}_{Q,school} - \bar{X}_{C,school}\right) = \text{var}\left(\bar{X}_{Q,school}\right) + \text{var}\left(\bar{X}_{C,school}\right)$$

We estimated the variance of the QOP-group mean for a given school according to:[11]

$$\text{var}\left(\bar{X}_{Q,school}\right) = \frac{1}{\left(\sum_{i \in Q,school} w_i\right)^2} \left(\frac{n_{Q,school}}{n_{Q,school} - 1}\right) \sum_{i \in Q,school} w_i^2 \left(X_i - \bar{X}_{Q,school}\right)^2$$

where $n_{Q,school}$ is the number of responding youth in the school's QOP group. When calculating any of the sums needed for estimating a mean or a variance, we included only those youth with valid (nonmissing) data for the outcome under consideration.[12]

---

[9] Because all of the youth from a school had the same probability of assignment to the QOP group, the only purpose of weighting is to adjust for unit nonresponse. We described earlier in this appendix how we derived weights.

[10] The basic idea is that we are not really interested in just the small population of youth who were eligible for random assignment. Rather, we would like to generalize to a "superpopulation" that includes other youth, including those who met the four QOP eligibility criteria (but were not selected for the initial sample) and those who would have been eligible in prior or subsequent academic years. If the group of youth eligible for random assignment were our population of interest, the QOP and control means would be correlated (because the control group is the complement of the QOP group). However, that correlation is not estimable—without some simplifying assumption—because we observe each youth in only one experimental state, that is, as either a QOP enrollee or a control. One simplifying assumption is that the impact of QOP is additive and fixed (the same for all youth). This assumption and the superpopulation approach lead to the same statistical procedure.

[11] A similar expression pertains for the variance of the control-group mean.

[12] Sample members who did not respond at all to the survey (or other data collection activity) from which data were obtained for the outcome under consideration were excluded because their weights were equal to zero. Sample members who responded to the survey but did not answer the question or questions relevant to the outcome were excluded from only those calculations for which they were missing data. The former group was substantially larger than the latter group for all of the outcomes that we considered. We sought to compensate for the loss of the former group by weighting respondents, as described previously.

## Impacts for Sites

We estimated the impact for a site according to:

$$impact_{site} = \sum_{school \in H_{site}} W_{school}\, impact_{school}$$

where $H_{site}$ is the set of schools from which youth were selected for the QOP program operated at the site in question.[13] In other words, we estimated the impact for a site by taking a weighted average of the impacts for the schools at that site. We based the school-level weights (the *W*) on the allocation of slots observed in the demonstration. In fact, $W_{school}$ was the fraction of the site's QOP slots allocated to the particular school. Thus, $W_{school}$ was 1.00 for Collinwood (Cleveland), Paschal (Fort Worth), Franklin (Philadelphia), and Davis (Yakima); 0.50 for Anacostia (Washington, D.C.), Eastern (Washington, D.C.), Austin (Houston), and Yates (Houston); 0.35 for Carver (Memphis); 0.27 for Hamilton (Memphis); and 0.38 for Hillcrest (Memphis). This was our best estimate of how slots would have been allocated had the sites been part of an ongoing, national program. In such a program, as in the demonstration, CBOs in some sites would work with just one school, while CBOs in other sites would have the same number of slots, but work with two or three schools. In the latter case, the CBOs would likely allocate slots in the same way that the CBOs in the demonstration did. Note that for each site:

$$\sum_{school \in H_{site}} W_{school} = 1$$

This approach to weighting schools when calculating an impact estimate for a site implied, for example, that:

$$impact_{Memphis} = 0.35 \times impact_{Carver} + 0.27 \times impact_{Hamilton} + 0.38 \times impact_{Hillcrest}$$

Treating the allocation of QOP slots across schools within a site as fixed, we estimated the variance of the site-level impact according to:

$$\text{var}\left(impact_{site}\right) = \sum_{school \in H_{site}} W_{school}^{2}\, \text{var}\left(impact_{school}\right)$$

This expression reflects the fact that for each site, we had the full population of schools from which youth were selected and the fact that random assignment was carried out independently in each school.

[13] $H_{site}$ consists of one school for Cleveland, Fort Worth, Philadelphia, and Yakima; two schools for Washington, D.C., and Houston; and three schools for Memphis.

**Impacts for the Whole Demonstration**

We estimated the impact for the whole QOP demonstration according to:

$$impact_{demo} = \sum_{site=1}^{7} A_{site}\, impact_{site}$$

where

$$\sum_{site=1}^{7} A_{site} = 1$$

Except when we assessed the sensitivity of our demonstration-level impact estimates to how we weighted sites (see Appendix F), we assumed that $A_{site} = 1/7$ for all sites. Thus, we estimated the impact for the whole demonstration by taking the simple average of the seven site impacts. As noted in the main text, our equal weighting of sites was based on the belief—or best guess—that if QOP were implemented as an ongoing, national program, CBOs would have roughly equal numbers of QOP slots. The relatively small sizes of the Washington, D.C., and Ford-funded programs in the demonstration were due to circumstances that we do not think would be replicated in a regular program.[14]

For deriving all of the estimates presented in this report, we assumed that the collection of sites in the QOP demonstration was a fixed set, that is, a population. Thus, we estimated the variance of the demonstration-level impact according to:

$$\text{var}\left(impact_{demo}\right) = \sum_{site=1}^{7} A_{site}^{2}\, \text{var}\left(impact_{site}\right)$$

Although the sites in the demonstration were not really a population, they were also not a probability sample. Nevertheless, if statistically significant impact estimates from the demonstration are to be useful for informing policy, the demonstration sites must be approximately representative of a population of potential sites. Then, we would want to treat the demonstration sites as a random sample (of size seven), and estimate the "total" variance of an impact estimate. The total variance has both a within-site component and a between-site component. The within-site component reflects the sampling error from selecting samples of youth in each site, and is captured by the expression already given for the variance of the demonstration-level impact. The between-site component reflects the differences among the impacts for the different sites. Although we might have preferred to obtain estimates of total variances, we were not able to estimate total variances very precisely because there were only seven sites in the demonstration. In fact, we discovered that for a large majority of impacts, the estimated total variance was smaller—often substantially smaller—than the estimated within-site component of variance. Because we preferred a well-estimated within-site component of variance to a poorly estimated total variance, we have presented the former as our variance estimates.

[14] The Ford Foundation wanted to fund two sites, but at only half of the size of DOL-funded sites, an outcome that would be unlikely to occur in a program that is fully funded by the federal government. The Washington, D.C., site was allocated 100 QOP slots, but given the short duration of the demonstration and the one-year delay in beginning program operations in the site, efforts to identify eligible youth were halted at a third QOP school that would have had 20 slots. This decision was not made early enough to increase the number of slots at the two remaining QOP schools.

As discussed in the main text, we conducted t-tests to determine whether estimated impacts were significantly different from zero. For a t-test, we calculated a t-statistic by dividing an impact estimate by its standard error. The standard error is the square root of the variance, and the variance was estimated according to the relevant expression given in this appendix.

# APPENDIX F

# SENSITIVITY ANALYSES

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

In this appendix, we test the sensitivity of the impact estimates to alternative estimation approaches. In particular, we test the sensitivity to:

- *Alternative approaches to weighting site-level impacts.* The impact estimates for the whole demonstration that are presented in this report were derived by weighting site-level impacts as though each site had the same number of QOP slots and enrollees. The alternative approach considered in this appendix weights site-level impacts in proportion to the actual number of slots and enrollees that sites had in the demonstration.

- *Using regression methods to adjust the impact estimates for random differences between the QOP group and the control group.* Although the difference-of-means estimates presented in this report are unbiased, they may have been affected by purely random differences between the baseline characteristics of QOP enrollees and the baseline characteristics of youth in the control group. Therefore, we adjusted for such differences using regression methods.

In each case, we determined whether our conclusions would have been different had they been based on estimates derived using the alternative approach. We found that our conclusions are generally robust to alternative approaches.

## ALTERNATIVE APPROACHES TO WEIGHTING SITE-LEVEL IMPACTS

Table F.1 presents the demonstration-level impact estimates—that is, estimates for all sites combined—that we obtained using two approaches to weighting site-level impacts: (1) weighting site-level impacts equally (the approach used everywhere else in this report) and (2) weighting site-level impacts in proportion to the number of QOP slots in each demonstration site. The latter approach assigned the following weights: 100/580 (.172) for the Cleveland, Fort Worth, Houston, and Memphis sites; 80/580 (.138) for the Washington, D.C., site; and 50/580 (.086) for the Philadelphia and Yakima sites. We estimated impacts and variances according to the expressions given in Appendix E, which allow for both equal and unequal weighting.

In Chapter VII, we found that impacts for the two Ford-funded sites were often much larger in absolute value than the impacts for the five DOL-funded sites (although many differences were not significant). Therefore, because the approach that weights sites unequally gives less weight to the Ford-funded sites than the approach that weights sites equally, we were not surprised to find that the demonstration-level impacts obtained when we weighted sites unequally are somewhat closer to zero than the impacts obtained when we weighted sites equally, if there is any difference at all.

Three of the four significant impacts obtained when we weighted sites equally are still significant—but smaller by one percentage point—when we weighted sites unequally. The fourth significant impact pertained to the likelihood of engaging in postsecondary education or training. When we weighted sites unequally, the impact on this outcome was one percentage point smaller—five rather than six percentage points—and not significantly different from zero. Thus, our conclusion that QOP significantly increased the likelihood of engaging in postsecondary education or training is sensitive to how we weighted site-level impacts. However, our conclusions about the significance of other impacts are not sensitive to how we weighted site-level impacts.

TABLE F.1

SHORT-TERM IMPACTS WHEN SITES ARE WEIGHTED EQUALLY VERSUS SHORT-TERM IMPACTS WHEN SITES ARE WEIGHTED UNEQUALLY
(Percentage points except where noted)

| Outcome[a] | Impacts | |
|---|---|---|
| | Sites Weighted Equally | Sites Weighted Proportional to Number of QOP Slots |
| Mathematics test score (percentile) | 0.38 | 0.20 |
| Reading test score (percentile) | 0.50 | 0.33 |
| GPA (four-point scale) | -0.06 | -0.06 |
| Earned high school diploma | 7* | 6** |
| Earned diploma or GED certificate | 5 | 4 |
| Attending college | 3 | 3 |
| Attending postsecondary training | 6* | 5 |
| Postsecondary training or good job | 5 | 3 |
| Postsecondary training or high school or GED class or any job | 3 | 3 |
| Attending or accepted into college | 6* | 5* |
| Binge drinking in past 30 days | 4 | 2 |
| Used any illegal drug in past 30 days | 7** | 6* |
| Committed any crime in past 12 months | 3 | 1 |
| Ever arrested or charged | -5 | -5 |
| Have one or more own children | -3 | -1 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

NOTE: Each impact was derived by subtracting the control-group mean from the QOP-group mean. The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. "College" means either a two-year or a four-year college. "Postsecondary training" means college, vocational/technical school, apprenticeship, or armed forces. A "good" job offers employer-sponsored health insurance. "Binge" drinking means five or more drinks in a row.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

## Baseline Differences Between the QOP and Control Groups

According to Table F.2, there was just one statistically significant difference between the means of baseline characteristics for the QOP and control groups for the whole demonstration. Compared with the control group, the QOP group had fewer youth in the middle third of the eighth-grade GPA distribution. When we examined QOP- and control-group means for schools—the level at which we conducted random assignment—we found only a few significant differences (not shown in Table F.2). For example, compared with the school's control group, the QOP group from Austin High School (Houston) had more youth over age 14 and fewer youth from the top third of the grade distribution; the QOP group from Yates High School (Houston) had fewer youth from the bottom third and more youth from the top third of the grade distribution; and the QOP group from Hillcrest High School (Memphis) had more youth from the middle third of the grade distribution.

## Deriving Regression-Adjusted Impact Estimates

We estimated a separate regression model for each of the key outcomes. Each regression model included 26 variables that we forced into the model and additional variables that were selected using an automated forward selection procedure. The variables that we forced into the model (and thus the variables common to all models) were 11 school indicators, 22 interactions between a QOP/control indicator and the 11 school indicators, an indicator for being male, an indicator for being over age 14 when entering ninth grade, an indicator for being in the middle third of the eighth-grade GPA distribution, and an indicator for being in the top third of the eight-grade GPA distribution. The variables that our forward selection procedure potentially added to the model were the 44 variables obtained by interacting the last four variables that were forced into the model with the 11 school indicators.[1]

For three outcomes—the mathematics test score, the reading test score, and high school GPA—we used linear regression methods to estimate the model chosen by our selection procedure. For the other outcomes, we used logit regression methods to estimate the chosen model.[2]

[1] Our model selection procedure first estimated coefficients for the variables forced into the model. Then, the procedure determined which excluded variable had the largest F-statistic for inclusion in the model. If the statistic was significant at the 85 percent confidence level, the procedure added the variable to the model. The procedure never removed a variable from the model. The procedure continued evaluating and adding excluded variables until there was no excluded variable that satisfied the criterion for inclusion.

[2] We used logit regression methods because the outcomes are binary, e.g. the youth either graduated or did not. Although we estimated the chosen models using logit regression methods, we used linear regression methods when implementing the forward selection procedure to choose a model. We found that regression-adjusted impact estimates obtained from logit models differ very little from estimates obtained from linear models. We report only the former.

TABLE F.2

GROUP MEANS FOR BASELINE CHARACTERISTICS
(Percentages)

| Baseline Characteristic | Means | |
|---|---|---|
| | QOP Group | Control Group |
| Male | 52 | 56 |
| Age when entering ninth grade | | |
| < 14 | 11 | 11 |
| 14 | 53 | 57 |
| > 14 | 36 | 31 |
| Hispanic | 26 | 26 |
| Black | 68 | 68 |
| Rank based on eighth-grade GPA | | |
| Bottom Third | 37 | 34 |
| Middle Third | 31† | 36† |
| Top Third | 32 | 30 |

SOURCE: Baseline database.

NOTE: The evaluation sample had 580 QOP enrollees and 489 controls.

† Significantly different from the mean for the other group at the 90% confidence level, two-tailed test
†† Significantly different from the mean for the other group at the 95% confidence level, two-tailed test
††† Significantly different from the mean for the other group at the 99% confidence level, two-tailed test

When we used linear regression methods, our estimate of the impact for a school was the estimated coefficient for the interaction between that school's indicator and the QOP/control indicator. Our estimate of the variance of the impact was the variance for the estimated coefficient. When we used logit regression methods, we obtained impact and variance estimates for schools from probabilities predicted by the logit model for the outcome under consideration.[3] After deriving school-level estimates, we derived site- and demonstration-level estimates using the expressions in Appendix E.

## Regression-Adjusted Impact Estimates

Table F.3 presents difference-of-means and regression-adjusted impact estimates, and Table F.4 presents standard errors and p-values for the impact estimates. Comparing the alternative impact estimates suggests that regression adjustment might affect only one of our conclusions—that QOP significantly increased the likelihood that an enrollee engaged in postsecondary education or training. The other three impacts that were significant according to difference-of-means estimates are also significant according to regression-adjusted estimates.

Table F.3 shows that regression adjustment reduced by one percentage point—from six to five percentage points—the impact on the likelihood of engaging in postsecondary education or training. Table F.4 shows that regression adjustment had a negligible effect on the precision of the impact estimate for this outcome (and most of the other outcomes). Because of the change in the impact estimate, the p-value for the t-statistic rose from 7.4 to 12.1 percent, crossing the 10 percent threshold. Thus, a significant impact became insignificant. The same impact became smaller and insignificant when we weighted site impacts unequally rather than equally, as discussed earlier in this appendix.

[3] Suppose that we are estimating a regression-adjusted impact on high school graduation. Then, for every youth from a given school, we used the estimated logit model for high school graduation to obtain four predicted probabilities while ignoring the youth's actual QOP/control status: (1) the probability of graduation if the youth is a control, (2) the probability of graduation if the youth is a QOP enrollee and the effect of QOP is measured by the coefficient on the interaction between the indicator for the youth's school and the QOP/control indicator, (3) the probability of graduation if the youth is a QOP enrollee and the effect of QOP is measured by the coefficient on the interaction between the indicator for the youth's school and the QOP/control indicator *plus* the standard error of the coefficient, and (4) the probability of graduation if the youth is a QOP enrollee and the effect of QOP is measured by the coefficient on the interaction between the indicator for the youth's school and the QOP/control indicator *minus* the standard error of the coefficient. Next, we calculated the mean for each of these probabilities across all of the youth from the school. The second mean minus the first mean was our impact estimate for the school. We estimated the variance of the impact by squaring the difference between the third and fourth means and dividing by four.

TABLE F.3

DIFFERENCE-OF-MEANS IMPACT ESTIMATES VERSUS REGRESSION-ADJUSTED IMPACT ESTIMATES
(Percentage points except where noted)

| Outcome[a] | Impacts | |
|---|---|---|
| | Difference of Means | Regression Adjusted |
| Mathematics test score (percentile) | 0.38 | 0.52 |
| Reading test score (percentile) | 0.50 | 0.57 |
| GPA (four-point scale) | -0.06 | -0.04 |
| Earned high school diploma | 7* | 7** |
| Earned diploma or GED certificate | 5 | 5 |
| Attending college | 3 | 3 |
| Attending postsecondary training | 6* | 5 |
| Postsecondary training or good job | 5 | 5 |
| Postsecondary training or high school or GED class or any job | 3 | 3 |
| Attending or accepted into college | 6* | 6* |
| Binge drinking in past 30 days | 4 | 3 |
| Used any illegal drug in past 30 days | 7** | 7** |
| Committed any crime in past 12 months | 3 | 4 |
| Ever arrested or charged | -5 | -3 |
| Have one or more own children | -3 | -4 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

NOTE: The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. "College" means either a two-year or a four-year college. "Postsecondary training" means college, vocational/technical school, apprenticeship, or armed forces. A "good" job offers employer-sponsored health insurance. "Binge" drinking means five or more drinks in a row.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test

TABLE F.4

STANDARD ERRORS AND P-VALUES FOR IMPACT ESTIMATES
(Percentage points except where noted)

| | Difference-of-Means Estimator | | Regression-Adjusted Estimator | |
|---|---|---|---|---|
| Outcome[a] | Standard Error | p-value | Standard Error | p-value |
| Mathematics test score (percentile) | 0.488 | 42.9 | 0.460 | 26.2 |
| Reading test score (percentile) | 0.528 | 33.2 | 0.514 | 26.4 |
| GPA (four-point scale) | 0.045 | 18.4 | 0.043 | 30.1 |
| Earned high school diploma | 3.4 | 5.0 | 3.3 | 4.5 |
| Earned diploma or GED certificate | 3.5 | 18.7 | 3.2 | 10.7 |
| Attending college | 2.8 | 22.9 | 3.0 | 29.0 |
| Attending postsecondary training | 3.2 | 7.4 | 3.3 | 12.1 |
| Postsecondary training or good job | 3.6 | 18.6 | 3.5 | 13.6 |
| Postsecondary training or high school or GED class or any job | 2.8 | 22.1 | 2.8 | 21.9 |
| Attending or accepted into college | 3.2 | 7.6 | 3.2 | 8.0 |
| Binge drinking in past 30 days | 3.0 | 16.9 | 3.6 | 42.8 |
| Used any illegal drug in past 30 days | 3.3 | 4.7 | 3.5 | 3.9 |
| Committed any crime in past 12 months | 3.3 | 35.8 | 3.4 | 29.4 |
| Ever arrested or charged | 3.3 | 14.3 | 2.9 | 31.4 |
| Have one or more own children | 3.1 | 29.5 | 2.8 | 17.3 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

NOTE: The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. "College" means either a two-year or a four-year college. "Postsecondary training" means college, vocational/technical school, apprenticeship, or armed forces. A "good" job offers employer-sponsored health insurance. "Binge" drinking means five or more drinks in a row.

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

# APPENDIX G

# SHORT-TERM IMPACTS ON PARTICIPANTS

**Page Is Intentionally Left Blank to Allow for Double-Sided Copying**

In this appendix, we present impacts for participants. Participants in the QOP demonstration were the enrollees who showed up and participated in program activities. No-shows were the enrollees who never showed up. Together, the participants and no-shows constituted the full group of QOP enrollees. All of the other impacts in this report pertain to enrollees.

We determined which enrollees showed up and thus were participants using data from the QOP management information system (MIS), which was used by program staff to calculate stipends and accrual account contributions. According to the MIS data, which were described in more detail in Chapter IV, only 5 (out of 580) enrollees had exactly zero hours of participation—the level of participation that corresponds to the literal definition of not showing up. Our operational definition of not showing up was participating for no more than 100 hours during the whole demonstration. Although this particular threshold is necessarily arbitrary, we believe that such a level of participation would usually result in a negligible impact on an enrollee. Most enrollees with so few hours participated in a few, generally recreational activities at the beginning of the demonstration and did not participate meaningfully after that. By our operational definition of not showing up, about 12 percent of QOP enrollees were no-shows. Thus, the show-up rate was 88 percent. Across the 11 QOP schools, show-up rates ranged from 77 to 96 percent.

To estimate impacts for participants, we assumed that QOP had no impact on no-shows. Then, if the impact per enrollee and the show-up rate for a school were $impact_{E,school}$ and $show_{school}$, respectively, the impact per participant was (Bloom, 1984):

$$impact_{P,school} = \frac{impact_{E,school}}{show_{school}}$$

where $show_{school}$ is expressed as a proportion rather than a percentage. In other words, $show_{school}$ is equal to the number of participants divided by the number of enrollees. To take account of the error in the estimated impact per enrollee, the error in the estimated show rate, and the correlation between those errors, we estimated the variance of the impact per participant according to:

$$\mathrm{var}\left(impact_{P,school}\right) = \frac{\mathrm{var}\left(impact_{E,school}\right)}{show_{school}^2} + \frac{impact_{P,school}^2 \,\mathrm{var}\left(show_{school}\right)}{show_{school}^2}$$

$$- \frac{2\, impact_{P,school} \,\mathrm{cov}\left(impact_{E,school}, show_{school}\right)}{show_{school}^2}$$

We derived the impact per enrollee and its variance according to the expressions in Appendix E, while obtaining the variance of the show rate according to:

$$\mathrm{var}\left(show_{school}\right) = \frac{show_{school}\left(1 - show_{school}\right)}{N_{Q,school} - 1}$$

where $N_{Q,school}$ is the number of QOP enrollees from the school. Then, noting that a control-group mean is uncorrelated with the show rate for enrollees, we estimated the covariance between the impact per enrollee and the show rate according to:

$$\text{cov}(impact_{E,school}, show_{school}) = \text{cov}(\bar{X}_{Q,school}, show_{school})$$

$$= \frac{1}{\left(\sum_{i \in Q,school} w_i\right)^2} \left(\frac{n_{Q,school}}{n_{Q,school} - 1}\right) \sum_{i \in Q,school} w_i^2 \left(X_i - \bar{X}_{Q,school}\right)\left(S_i - \bar{S}_{school}\right)$$

where $S_i$ is an indicator for whether enrollee $i$ showed up and $\bar{S}_{school}$ is the weighted (by $w_i$) mean of $S_i$ over the $n_{Q,school}$ QOP enrollees with nonmissing values of $X$. We derived $w_i$ and the mean of $X_i$ as described in Appendix E. After we estimated the impact per participant and the variance of that impact for each school, we derived impact and variance estimates for each site and for the whole demonstration (all sites combined) according to the expressions in Appendix E pertaining to site- and demonstration-level impacts.

Because an impact on participants for a school is obtained by dividing the impact on enrollees by a number that is less than or equal to one—that is, the show rate expressed as a proportion—the impact on participants is at least as large as the impact on enrollees. Also, the standard error for an impact on participants tends to be larger than the standard error for the impact on enrollees by the same proportion by which the impact on participants is larger than the impact on enrollees. Thus, the t-statistics pertaining to impacts on participants and impacts on enrollees tend to be about equal, and significance tests usually lead to the same conclusions.

Table G.1 presents the impacts on participants and the previously discussed impacts on enrollees for the whole demonstration. Many of the impacts on participants rounded to the same values as the impacts on enrollees, and the rest of the impacts on participants are only slightly larger than the impacts on enrollees. All of the significance tests led to the same conclusions for participants and enrollees.

TABLE G.1

SHORT-TERM IMPACTS ON QOP PARTICIPANTS AND QOP ENROLLEES
(Percentage points except where noted)

| Outcome[a] | Impacts | |
|---|---|---|
| | Participants | Enrollees |
| Mathematics test score (percentile) | 0.42 | 0.38 |
| Reading test score (percentile) | 0.55 | 0.50 |
| GPA (four-point scale) | -0.08 | -0.06 |
| Earned high school diploma | 8** | 7* |
| Earned diploma or GED certificate | 5 | 5 |
| Attending college | 4 | 3 |
| Attending postsecondary training | 6* | 6* |
| Postsecondary training or good job | 5 | 5 |
| Postsecondary training or high school or GED class or any job | 4 | 3 |
| Attending or accepted into college | 6* | 6* |
| Binge drinking in past 30 days | 4 | 4 |
| Used any illegal drug in past 30 days | 7* | 7** |
| Committed any crime in past 12 months | 3 | 3 |
| Ever arrested or charged | -5 | -5 |
| Have one or more own children | -3 | -3 |

SOURCE: In-person survey, achievement tests, telephone survey, and transcripts.

NOTE: The evaluation sample had 580 QOP enrollees and 489 controls.

[a] Achievement test scores are expressed as percentiles in the distribution of scores for tenth graders in the United States. "College" means either a two-year or a four-year college. "Postsecondary training" means college, vocational/technical school, apprenticeship, or armed forces. A "good" job offers employer-sponsored health insurance. "Binge" drinking means five or more drinks in a row.

* Estimate significantly different from zero at the 90% confidence level, two-tailed test
** Estimate significantly different from zero at the 95% confidence level, two-tailed test
*** Estimate significantly different from zero at the 99% confidence level, two-tailed test