

What Works Clearinghouse



The Quantum Opportunity Program

Program description The *Quantum Opportunity Program (QOP)* is an intensive and comprehensive program for high school–aged youth that offers case management, mentoring, tutoring, and other education and support services. The program also offers financial incentives for participation in program activities. Participants enter *QOP* in the ninth grade and can receive services for four to five years, even if they drop out of school or move to another district.

Research One study of the *Quantum Opportunity Program* met the What Works Clearinghouse (WWC) evidence standards with reservations. This randomized controlled trial included nearly 1,100 youth and was conducted in seven school districts in Cleveland, Ohio; Fort Worth, Texas; Houston, Texas; Memphis, Tennessee; Washington, DC; Philadelphia, Pennsylvania; and Yakima, Washington.¹ The WWC considers the extent of evidence for *QOP* to be small for progressing in school and for completing school. No studies that met WWC evidence standards with or without reservations addressed staying in school.

Effectiveness The *Quantum Opportunity Program* was found to have no discernible effects on progressing in school or completing school.

	<i>Staying in school</i>	<i>Progressing in school</i>	<i>Completing school</i>
Rating of effectiveness	na	No discernible effects	No discernible effects
Improvement index²	na	Average: +2 percentile points	Average: +4 percentile points

na = not applicable

1. The evidence presented in this report is based on available research. Findings and conclusions may change as new research becomes available.
 2. These numbers show the average improvement indices for all findings across the study.

Absence of conflict of interest

The *QOP* study that this intervention report summarizes was prepared by staff of Mathematica Policy Research, Inc. (MPR). Because the principal investigator for the WWC dropout prevention review is an MPR staff member, the study was rated by staff

members from Caliber, an ICF International Company, who also prepared the intervention report. The report was then reviewed by MPR staff members, as well as members of the WWC Technical Review Team and external peer reviewers.

Additional program information

Developer and contact

Information on the history of the *QOP* model and current resources for program implementation are available from the Eisenhower Foundation. Web: <http://www.eisenhowerfoundation.org/replicating.php>. Telephone: (202) 234-8104.

Scope of use

QOP originated in 1989 as part of a demonstration program funded by the Ford Foundation. The original demonstration—which operated from 1989 through 1993—served about 125 students in five locations in five states. *QOP* was then replicated on a larger scale as part of the *QOP* Demonstration Project, funded by the U.S. Department of Labor and the Ford Foundation. As part of this demonstration—which operated from 1995 to 2001—*QOP* was offered in seven sites in six states with about 600 enrollees. From 2002 to 2006, the Eisenhower Foundation replicated *QOP* in four additional sites serving 60 students. Its current scope of use is not known.

Description of intervention

QOP is an intensive case management and mentoring program for at-risk youth. Through a comprehensive set of services, *QOP* aims to encourage participants to finish high school, enroll in college, and avoid risky behaviors such as substance abuse,

crime, and teenage parenting. Participants begin the program as ninth graders and are offered services for four to five years, even if they drop out of school or move away. In addition to case management and mentoring, *QOP* provides educational services, such as after-school tutoring and computer-assisted instruction, with a focus on basic reading and math skills. It also offers developmental and recreational activities that aim to build strong relationships with case managers and peers. Participants are also encouraged to participate in community service activities. *QOP* offers a wide array of support services, including transportation, child care, and emergency financial assistance. *QOP* uses financial incentives to encourage sustained program participation. Participants are paid a stipend for every hour devoted to core program activities. They receive some of this money immediately, with the rest placed in a savings account that they can access when and if they complete high school or earn a GED.

Cost

In six of the seven *QOP* Demonstration Project sites, costs ranged from \$22,000 to \$28,000 per enrollee over the full five years of the demonstration.³ The other *QOP* site (Philadelphia) had much higher costs—averaging \$59,000 per enrollee over five years—primarily because of higher labor costs.

Research

The WWC reviewed two studies of the effectiveness of *QOP*. One study (Schirm, Stuart, & McKie, 2006)⁴ was a randomized controlled trial that met WWC evidence standards with reserva-

tions because of differential attrition between intervention and control groups.⁵ The other study of *QOP* did not meet WWC evidence screens.

3. See Maxfield, Schirm, & Rodriguez-Planas (2003). Costs have been converted to 2006 dollars using the Consumer Price Index.

4. The impact estimates summarized here come from two different reports from the same study. The impact on credits earned used to rate *QOP*'s effectiveness in the progressing in school domain was reported in Schirm, Rodriguez-Planas, Maxfield, & Tuttle (2003). High school completion impacts used by the WWC for rating *QOP*'s effectiveness in the completing school domain were reported in Schirm, Stuart, & McKie (2006).

Research *(continued)*

The Schirm, Stuart, & McKie (2006) study was conducted in seven sites in six states and used a random assignment design in which eligible youth were assigned to either the intervention group or a control group. The study included 1069 students (580 QOP students and 489 control group students) entering the ninth grade in fall 1995. The students were identified as eligible for QOP based on having low grades during their eighth-grade year. Students who were repeating the ninth grade or who had severe physical or learning disabilities that would prevent them from participating in the program were not eligible for QOP.

Effectiveness Findings

The WWC review of interventions for dropout prevention addresses student outcomes in three domains: staying in school, progressing in school, and completing school. The QOP study by Schirm and his colleagues examined outcomes in the progressing in school and completing school domains.

Progressing in school. Schirm and his colleagues found no statistically significant or substantively important⁷ difference between QOP and control group youth in their average credits earned toward graduation five years after they entered the program.⁸

Completing school. Schirm and his colleagues found that QOP had no statistically significant or substantively important effect on

Extent of evidence

The WWC categorizes the extent of evidence in each domain as small or moderate to large (see the [What Works Clearinghouse Extent of Evidence Categorization Scheme](#)). The extent of evidence takes into account the number of studies and total sample size across the studies that met WWC evidence standards with or without reservations.⁶

The WWC considers the extent of evidence for QOP to be small for progressing in school and for completing school. No studies that met WWC evidence standards with or without reservations addressed staying in school.

the likelihood that participants earned a high school diploma or received a GED within nine years of entering the program.⁹

Rating of effectiveness

The WWC rates the effects of an intervention in a given outcome domain as: positive, potentially positive, mixed, no discernible effects, potentially negative, or negative. The rating of effectiveness takes into account four factors: the quality of the research design, the statistical significance of the findings,¹⁰ the size of the difference between participants in the intervention and the comparison conditions, and the consistency in findings across studies (see the [WWC Intervention Rating Scheme](#)).

5. The credits earned measure used to rate QOP's effectiveness in the progressing in school domain was available for 86% of the QOP group and 77% of the control group, exceeding the 5% differential attrition threshold used for WWC dropout prevention reviews. The high school completion measure was available for 88% of the QOP group and 83% of the control group, a difference equal to the differential attrition standard. Because one measure used to rate QOP's effectiveness exceeded the differential attrition standard, the WWC downgraded the study to meeting standards with reservations. The sample sizes needed for calculating these percentages were provided to the WWC by the study authors.
6. The Extent of Evidence Categorization was developed to tell readers how much evidence was used to determine the intervention rating, focusing on the number and size of studies. Additional factors associated with a related concept, external validity, such as students' demographics and types of settings in which studies took place, are not taken into account for the categorization. Information concerning how the extent of evidence rating was determined for QOP is presented in Appendix A6.
7. The WWC considers a non-statistically significant effect to be substantively important if the magnitude of the effect size is greater than or equal to an absolute value of 0.25.
8. These results were presented in an earlier report from the same study (see Schirm, Rodriguez-Planas, & Tuttle, 2003).
9. Two earlier reports from this study found that QOP also had no statistically significant or substantively important effect on high school diploma or GED receipt at four years (Schirm, Rodriguez-Planas, & Tuttle, 2003) and seven years after program entry (Schirm & Rodriguez-Planas, 2004).
10. The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within classrooms or schools and for multiple comparisons. For an explanation, see the [WWC Tutorial on Mismatch](#). See [Technical Details of WWC-Conducted Computations](#) for the formulas the WWC used to calculate the statistical significance. In the case of the Schirm et al. (2003, 2004) study summarized here, no corrections for clustering or multiple comparisons were needed.

The WWC found QOP to have no discernible effects on progressing in school or completing school

Improvement index

The WWC computes an improvement index for each individual finding. In addition, within each outcome domain, the WWC computes an average improvement index for each study and an average improvement index across studies (see [Technical Details of WWC-Conducted Computations](#)). The improvement index represents the difference between the percentile rank of the average student in the intervention condition versus the percentile rank of the average student in the comparison condition. Unlike the rating of effectiveness, the improvement index is based entirely on the size of the effect, regardless of the statistical significance of the effect, the study design, or the analyses. The improvement index can take on values between

-50 and +50, with positive numbers denoting results favorable to the intervention group.

The average improvement index is +2 percentile points for progressing in school and +4 percentile points for completing school based on the one study of QOP that passed evidence screens.

Summary

The WWC reviewed two studies of the effectiveness of QOP. One study met WWC standards with reservations; the other did not meet WWC evidence screens. Based on the results from the one qualifying study, the WWC found no discernible effects on progressing in school or completing school. The evidence presented in this report may change as new research emerges.

References

Met WWC evidence standards with reservations

Schirm, A., Stuart, E., & McKie, A. (2006). *The Quantum Opportunity Program demonstration: Final impacts*. Washington, DC: Mathematica Policy Research, Inc.

Additional sources:

Maxfield, M., Castner, L., Maralani, V., & Vencill, M. (2003). *The Quantum Opportunity Program demonstration: Implementation findings*. Washington, DC: Mathematica Policy Research, Inc.

Maxfield, M., Schirm, A., & Rodriguez-Planas, N. (2003). *The Quantum Opportunity Program demonstration: Implementation and short-term impacts*. Washington, DC: Mathematica Policy Research, Inc.

Schirm, A., & Rodriguez-Planas, N. (2004). *The Quantum Opportunity Program demonstration: Initial post-intervention impacts*. Washington, DC: Mathematica Policy Research, Inc.

Schirm, A., Rodriguez-Planas, N., Maxfield, M., & Tuttle, C. (2003). *The Quantum Opportunity Program demonstration: Short-term impacts*. Washington, DC: Mathematica Policy Research, Inc.

Did not meet WWC evidence screens

Hahn, A., Leavitt, T., & Aaron, P. (1994). *Evaluation of the Quantum Opportunities Program (QOP): Did the program work? A report on the post secondary outcomes and cost effectiveness of the QOP program (1989-1993)*. Waltham, MA: Brandeis University, Center for Human Resources.¹¹

For more information about specific studies and WWC calculations, please see the [WWC QOP Technical Appendices](#).

11. The study, which began as a randomized controlled trial, allowed for the replacement of subjects who left the program, creating a quasi-experimental design. The study also had high attrition rates, so it did not pass WWC evidence screens.