

# What Works Clearinghouse



## Summer Training and Education Program (STEP)

### Program Description<sup>1</sup>

*Summer Training and Education Program (STEP)* is a summer employment, academic remediation, and life skills program intended to lower school dropout rates by reducing summer learning loss and preventing teen parenthood. The program is integrated into the federal summer jobs program and is offered during six-to-eight-week sessions in two consecutive summers.

It includes part-time summer work at minimum wage, a daily reading and math curriculum, and “life skills and opportunities” classes that focus on topics such as sexual behavior, drug use, careers, and community involvement. The program serves low-income 14- and 15-year-olds who have tested below grade level in either reading or math.

### Research<sup>2</sup>

One study of *STEP* meets What Works Clearinghouse (WWC) evidence standards. The randomized controlled trial included more than 2,500 students in four states: Massachusetts, California, Washington, and Oregon. Based on this study, the WWC considers the extent of evidence for *STEP* to be small for the

staying in school and progressing in school domains. No studies of *STEP* that meet WWC evidence standards with or without reservations include evidence in the completing school domain that could be used to rate the intervention’s effectiveness.<sup>3</sup>

### Effectiveness

*STEP* was found to have no discernible effects on either staying in school or progressing in school.

	<i>Staying in school</i>	<i>Progressing in school</i>	<i>Completing school</i>
<b>Rating of effectiveness</b>	No discernible effects	No discernible effects	na
<b>Improvement index<sup>4</sup></b>	Average: -2 percentile points Range: -7 to +2 percentile points	n/a n/a	na na

na = not applicable  
n/a = not available<sup>5</sup>

1. The descriptive information for this program was obtained from publicly available sources: Grossman and Sipe (1992) and Walker and Vilella-Velez (1992). Full citations are included in the reference section. The WWC requests developers to review the program description sections for accuracy from their perspective. Further verification of the accuracy of the descriptive information for this program is beyond the scope of this review.
2. The studies in this report were reviewed using WWC Evidence Standards Version 1.0 (See the WWC Standards).
3. The evidence presented in this report is based on available research. Findings and conclusions may change as new research becomes available.
4. These numbers show the average and range of student-level improvement indices for all findings across the study.
5. The WWC was unable to calculate an improvement index for the progressing in school domain because the study authors did not report enough information to make this calculation.

## Additional program information

### Developer and contact

Developed and evaluated by Public/Private Ventures (P/PV), *STEP* is no longer an active program, and no current developer or contact information is available. Additional information about the *STEP* model and the implementation experience of the organizations that used it can be found in Walker and Vilella-Velez (1992), listed in the references for this report.

### Scope of use

*STEP* was initially implemented in 1984 as a pilot program operating through two local Job Training and Partnership Act (JTPA) employment and training agencies. In 1985, the program began a five-site national research demonstration. In 1987, the program began rolling out a national replication effort with funding from both private and government sources. From 1987 through 1991, *STEP* served more than 20,000 youth at 100 sites in 15 states. Although the program has since ended, the core components—job placement combined with educational remediation—are shared with many programs for disadvantaged youth still operating, such as youth programs funded through the Workforce Investment Act.

### Description of intervention

*STEP* is a summer employment, academic remediation, and life skills program intended to lower school dropout rates by reducing summer learning loss and preventing teen parenthood. The program is offered during six-to-eight-week sessions in two consecutive summers and serves low-income 14- and 15-year-olds who tested below grade level in either reading or math. The *STEP* model is an enhancement to the federal summer jobs

program that offers full-time, paid summer work experience to youth from low-income families.

Each summer, participants are expected to complete approximately 200 hours of program activities, including part-time summer employment, a reading and math curriculum, and life skills classes. *STEP* jobs are similar to those offered through the standard federal summer employment program, except that *STEP* jobs are half time rather than full time in order to accommodate the program's remediation and life skills components. Employment opportunities vary by site and can include day care center work, buildings and grounds maintenance, and clerical positions. *STEP* reading and math classes meet daily and include computer-assisted instruction, practical exercises, journal writing, and sustained silent reading. *STEP* life skills and opportunities classes meet twice a week and focus on topics such as decision making, sexual behavior, drug use, careers, and community involvement. *STEP* participants are paid both for the time they spend in the classroom and on the job, so that participants' wages are equivalent to those earned by participants in the regular summer jobs program. During the school year following *STEP*'s first summer, the program also offers a small, voluntary component consisting of recreation and other non-educational activities. This component is designed to encourage participants to return for *STEP*'s second summer.

### Cost

Researchers estimate the per-participant cost of one summer spent in *STEP* to be \$2,455—about 60% higher than the per-participant cost in the standard federal summer jobs program (estimated to be \$1,535).<sup>6</sup>

## Research

Three studies reviewed by the WWC investigated the effects of *STEP*. One of these studies (Grossman & Sipe, 1992) meets WWC evidence standards. The other two studies (Private Industry Council of San Francisco, 1995; Walker & Vilella-Velez,

1992) do not meet either WWC evidence standards or eligibility screens.

The Grossman and Sipe (1992) study was a randomized controlled trial in which students were randomly assigned either to the intervention group that was offered admission to *STEP* or

6. See Walker and Vilella-Velez (1992). The WWC converted costs to 2008 dollars using the consumer price index.



**The WWC found *STEP* to have no discernible effects on either staying in school or progressing in 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 entirely based on the size of the effect, regardless of the statistical significance of the effect, the study design, or the analysis. 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 for staying in school is -2 percentile points in the study covered in this report, with a range of -7 to +2 percentile points across findings. The WWC is not able to calculate an improvement index for the progressing in school domain because the study that examined this domain did not include standard deviations for the relevant outcomes.

**Summary**

The WWC reviewed three studies of *STEP*. One of these studies meets WWC evidence standards; the remaining two studies do not meet either WWC evidence standards or eligibility screens. Based on the one study, the WWC found the intervention to have no discernible effects on either staying in school or progressing in school. The conclusions presented in this report may change as new research emerges.

**References**

**Meets WWC evidence standards**

Grossman, J. B., & Sipe, C. L. (1992). Summer Training and Education Program (STEP): *Report on long-term impacts*. Philadelphia, PA: Public/Private Ventures.

**Additional sources:**

Branch, A. Y., Milliner, J. A., & Bumbaugh, J. (1986). Summer Training and Education Program (STEP): *Report on the 1985 summer experience*. Philadelphia, PA: Public/Private Ventures.

Sipe, C. L. (1988). Summer Training and Education Program (STEP): *Report on the 1987 experience*. Philadelphia, PA: Public/Private Ventures.

Sipe, C. L., Grossman, J. B., & Milliner, J. A. (1987). Summer Training and Education Program (STEP): *Report on the 1986 experience*. Philadelphia, PA: Public/Private Ventures.

**Studies that fall outside the Dropout Prevention protocol or do not meet WWC evidence standards**

Private Industry Council of San Francisco. (1995). STEP, Summer Training and Education Program: *Evaluation report, STEP II students 1990-1995, current students 1992-1995*. San Francisco, CA: Author. The study is ineligible for review because it does not use a comparison group.

Walker, G., & Vilella-Velez, F. (1992). *Anatomy of a demonstration: The Summer Training and Education Program (STEP) from pilot through replication and postprogram impacts*. Philadelphia, PA: Public/Private Ventures. The study is ineligible for review because it is not a primary analysis of the effectiveness of an intervention.



## Appendix A1 Study Characteristics: Grossman and Sipe, 1992 (randomized controlled trial) (continued)

Characteristic	Description
Primary outcomes and measurement	The relevant study outcomes included in this review are whether students dropped out of school and their highest grade completed, based on student follow-up interviews. For a more detailed description of these outcome measures, see Appendices A2.1 and A2.2.
Staff/teacher training	<p>Each site hired a lead teacher who was primarily responsible for overseeing the remediation component, hiring teachers, planning and providing teacher training, and assembling a curriculum development team of reading and math teachers to develop curriculum modules for site use. The lead teacher also assumed responsibility for seeing that life skills staff were supported and successfully integrated into program operations. Remediation teachers also received in-service training over the course of the summer program, an average of 4 to 6 hours total. In addition, before this cohort's second summer of participation, the evaluator's consultants and staff delivered preservice training to all remediation teachers at participating sites. <i>STEP</i> teachers received an average of between 15 and 20 hours of preservice training (the hours varied by site). In addition to specific topics outlined in the training guides, teacher training included an orientation to the program, discussions on the integration of the life skills and work experience components, and a review of modules and program logistics.</p> <p>For the life skills component, all life skills instructors attended a two-day comprehensive training workshop. This training included a review of curriculum content, an analysis of instructional techniques, a discussion of classroom management issues, and a series of role-plays and other sensitizing activities. They received minimal in-service training.</p>

## Appendix A2.1 Outcome measures for the staying in school domain

Outcome measure	Description
Dropped out	Whether the student reported having dropped out of school. These self-reported data were collected from follow-up surveys. For Cohort 2, the follow-up survey was conducted four-and-one-half years after random assignment. For Cohort 3, the follow-up survey was conducted three-and-one-half years after random assignment.

## Appendix A2.2 Outcome measures for the progressing in school domain

Outcome measure	Description
Highest grade completed	Number of years of school completed. These self-reported data were collected from follow-up surveys. For Cohort 2, the follow-up survey was conducted four-and-one-half years after random assignment. For Cohort 3, the follow-up survey was conducted three-and-one-half years after random assignment.

## Appendix A3.1 Summary of study findings included in the rating for the staying in school domain<sup>1</sup>

Outcome measure	Study sample	Sample size (students)	Authors' findings from the study		WWC calculations			
			Mean outcome		Mean difference <sup>2</sup> (STEP—comparison)	Effect size <sup>3</sup>	Statistical significance <sup>4</sup> (at $\alpha = 0.05$ )	Improvement index <sup>5</sup>
			STEP group	Comparison group				
<b>Grossman and Sipe, 1992 (randomized controlled trial)<sup>6</sup></b>								
Dropped out	Cohort 2	1,253	29.2	25.1	−4.1	−0.13	ns	−7
Dropped out	Cohort 3	1,335	21.6	22.6	1.0	0.04	ns	2
<b>Domain average for staying in school across study findings<sup>7</sup></b>						<b>−0.06</b>	<b>ns</b>	<b>−2</b>

ns = not statistically significant

1. This appendix reports findings considered for the effectiveness rating and the average improvement indices for the staying in school domain. The rating for the staying in school domain is based only on findings for dropout measures from student follow-up surveys. Findings for dropout measures from school reports are not included because the study authors argue that these measures are inaccurate.
2. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group. For the dropout outcome, signs were reversed on the mean difference, effect size, and improvement index to demonstrate that the treatment group was favored when negative differences were reported. Mean differences reflect regression-adjusted treatment impacts estimated by the authors. Mean outcomes for the STEP group were calculated by adding this impact estimate to the comparison group mean.
3. For an explanation of the effect size calculation, see Technical Details of WWC-Conducted Computations.
4. Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups.
5. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between −50 and +50, with positive numbers denoting favorable results.
6. The level of statistical significance was reported by the study authors or, when necessary, calculated by the WWC to correct for clustering within classrooms or schools and for multiple comparisons. For an explanation about the clustering correction, see the WWC Tutorial on Mismatch. For the formulas the WWC used to calculate statistical significance, see Technical Details of WWC-Conducted Computations. For the STEP study summarized here, no corrections for clustering or multiple comparisons were needed.
7. The study also included a Cohort 1 analysis that did not meet WWC evidence standards. These results were therefore not used to rate the effectiveness of STEP.



## Appendix A3.2 Summary of study findings included in the rating for the progressing in school domain<sup>1</sup>

Outcome measure	Study sample	Sample size (students)	Authors' findings from the study		WWC calculations			
			Mean outcome		Mean difference <sup>2</sup> (STEP—comparison)	Effect size <sup>3</sup>	Statistical significance <sup>4</sup> (at $\alpha = 0.05$ )	Improvement index <sup>5</sup>
			STEP group	Comparison group				
<b>Grossman and Sipe, 1992 (randomized controlled trial)<sup>6</sup></b>								
Highest grade completed	Cohort 2	1,231	11.2	11.2	0.0	n/a	ns	n/a
Highest grade completed	Cohort 3	1,327	10.8	10.9	0.0	n/a	ns	n/a
<b>Domain average for progressing in school across all studies<sup>7</sup></b>						<b>n/a</b>	<b>ns</b>	<b>n/a</b>

ns = not statistically significant

n/a = not available<sup>8</sup>

1. This appendix reports findings considered for the effectiveness rating and the average improvement indices for the progressing in school domain. The rating for the progressing in school domain is based only on findings for highest grade completed measures from student follow-up surveys. Findings for dropout measures from school reports are not included because the study authors argue that these measures are inaccurate.
2. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group. Mean differences reflect regression-adjusted treatment impacts estimated by the authors. Mean outcomes for the *STEP* group were calculated by adding this impact estimate to the comparison group mean.
3. For an explanation of the effect size calculation, see Technical Details of WWC-Conducted Computations.
4. Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups.
5. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between -50 and +50, with positive numbers denoting favorable results.
6. The level of statistical significance was reported by the study authors or, when necessary, calculated by the WWC to correct for clustering within classrooms or schools and for multiple comparisons. For an explanation about the clustering correction, see the WWC Tutorial on Mismatch. For the formulas the WWC used to calculate statistical significance, see Technical Details of WWC-Conducted Computations. For the *STEP* study summarized here, no corrections for clustering or multiple comparisons were needed.
7. The study also included a Cohort 1 analysis that did not meet WWC evidence standards. These results were therefore not used to rate the effectiveness of *STEP*.
8. The WWC was unable to calculate an effect size or an improvement index in the progressing in school domain because the study authors did not report a standard deviation for the outcome.

## Appendix A4 Summary of graduation rate findings for the completing school domain<sup>1</sup>

Outcome measure	Study sample	Sample size (students)	Authors' findings from the study					
			Mean outcome		WWC calculations			
			STEP group	Comparison group	Mean difference <sup>2</sup> (STEP—comparison)	Effect size <sup>3</sup>	Statistical significance <sup>4</sup> (at $\alpha = 0.05$ )	Improvement index <sup>5</sup>
<b>Grossman and Sipe, 1992 (randomized controlled trial)<sup>6</sup></b>								
Earned a high school diploma or GED	Students old enough to graduate in Cohort 2	1,119	58.1	63.9	–5.8	–0.20	nr	–8
Earned a high school diploma or GED	Students old enough to graduate in Cohort 3	539	64.8	62.4	2.4	0.08	ns	3

ns = not statistically significant

nr = not reported

1. This appendix presents findings for measures that fall in the completing school domain. The outcome was collected from student follow-up surveys and represents whether the student had received a high school diploma or GED. For Cohort 2, the follow-up survey was conducted four-and-one-half years after random assignment. For Cohort 3, the follow-up survey was conducted three-and-one-half years after random assignment. The Cohort 2 findings were not used for rating purposes because the analysis sample exhibited high attrition and the study did not present evidence that the research groups from the analysis sample were equivalent at baseline. The Cohort 3 findings were not used for rating purposes because the study did not provide sufficient information to calculate the rate of attrition for the analysis sample, nor did it present evidence that the research groups from the analysis sample were equivalent at baseline.
2. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group.
3. For an explanation of the effect size calculation, see Technical Details of WWC-Conducted Computations.
4. Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups. Authors reported statistical significance for graduation rates at the  $\alpha = 0.10$  level, so it was not possible to determine whether findings were significant at the  $\alpha = 0.05$  level.
5. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between –50 and +50, with positive numbers denoting favorable results.
6. The level of statistical significance was reported by the study authors or, when necessary, calculated by the WWC to correct for clustering within classrooms or schools and for multiple comparisons. For an explanation about the clustering correction, see the WWC Tutorial on Mismatch. For the formulas the WWC used to calculate statistical significance, see Technical Details of WWC-Conducted Computations. For the STEP study summarized here, no corrections for clustering or multiple comparisons were needed.

## Appendix A5.1 STEP rating for the staying in school domain

The WWC rates an intervention's effects for a given outcome domain as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative.<sup>1</sup> For the outcome domain of staying in school, the WWC rated *STEP* as having no discernible effects.

### Rating received

**No discernible effects:** No affirmative evidence of effects.

- Criterion 1: None of the studies shows a statistically significant or substantively important effect, either *positive* or *negative*.

**Met.** No studies of *STEP* showed a statistically significant or substantively important effect.

### Other ratings considered

**Positive effects:** Strong evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: Two or more studies showing statistically significant *positive* effects, at least one of which met WWC evidence standards for a *strong* design.

**Not met.** No studies of *STEP* showed a statistically significant or substantively important effect.

#### AND

- Criterion 2: No studies showing statistically significant or substantively important *negative* effects.

**Met.** No studies of *STEP* showed a statistically significant or substantively important negative effect.

**Potentially positive effects:** Evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: At least one study showing a statistically significant or substantively important *positive* effect.

**Not met.** No studies of *STEP* showed a statistically significant or substantively important effect.

#### AND

- Criterion 2: No studies showing a statistically significant or substantively important *negative* effect and fewer or the same number of studies showing *indeterminate* effects than showing statistically significant or substantively important *positive* effects.

**Met.** No studies of *STEP* showed a statistically significant or substantively important effect.

**Mixed effects:** Evidence of inconsistent effects as demonstrated through either of the following criteria.

- Criterion 1: At least one study showing a statistically significant or substantively important *positive* effect, and at least one study showing a statistically significant or substantively important *negative* effect, but no more such studies than the number showing a statistically significant or substantively important *positive* effect.

**Not met.** No studies of *STEP* showed a statistically significant or substantively important effect.

#### OR

- Criterion 2: At least one study showing a statistically significant or substantively important effect, and more studies showing an *indeterminate* effect than showing a statistically significant or substantively important effect.

**Not met.** No studies of *STEP* showed a statistically significant or substantively important effect.

1. For rating purposes, the WWC considers the statistical significance of individual outcomes and the domain-level effect. The WWC also considers the size of the domain-level effect for ratings of potentially positive or potentially negative effects. For a complete description, see the WWC Intervention Rating Scheme.

(continued)

## Appendix A5.1 *STEP* rating for the staying in school domain *(continued)*

**Potentially negative effects:** Evidence of a negative effect with no overriding contrary evidence.

- Criterion 1: At least one study showing a statistically significant or substantively important *negative* effect.

**Not met.** No studies of *STEP* showed a statistically significant or substantively important effect.

**AND**

- Criterion 2: No studies showing a statistically significant or substantively important *positive* effect, or more studies showing statistically significant or substantively important *negative* effects than showing statistically significant or substantively important *positive* effects.

**Met.** No studies of *STEP* showed a statistically significant or substantively important effect.

**Negative effects:** Strong evidence of a negative effect with no overriding contrary evidence.

- Criterion 1: Two or more studies showing statistically significant *negative* effects, at least one of which met WWC evidence standards for a *strong* design.

**Not met.** No studies of *STEP* showed a statistically significant or substantively important effect.

- Criterion 2: No studies showing statistically significant or substantively important *positive* effects.

**Met.** No studies of *STEP* showed a statistically significant or substantively important effect.

## Appendix A5.2 STEP rating for the progressing in school domain

The WWC rates an intervention's effects for a given outcome domain as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative.<sup>1</sup> For the outcome domain of progressing in school, the WWC rated *STEP* as having no discernible effects.

### Rating received

**No discernible effects:** No affirmative evidence of effects.

- Criterion 1: None of the studies shows a statistically significant or substantively important effect, either *positive* or *negative*.

**Met.** No studies of *STEP* showed a statistically significant or substantively important effect.

### Other ratings considered

**Positive effects:** Strong evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: Two or more studies showing statistically significant *positive* effects, at least one of which met WWC evidence standards for a *strong* design.

**Not met.** No studies of *STEP* showed a statistically significant or substantively important effect.

### AND

- Criterion 2: No studies showing statistically significant or substantively important *negative* effects.

**Met.** No studies of *STEP* showed a statistically significant or substantively important effect.

**Potentially positive effects:** Evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: At least one study showing a statistically significant or substantively important *positive* effect.

**Not met.** No studies of *STEP* showed a statistically significant or substantively important effect.

### AND

- Criterion 2: No studies showing a statistically significant or substantively important *negative* effect and fewer or the same number of studies showing *indeterminate* effects than showing statistically significant or substantively important *positive* effects.

**Met.** No studies of *STEP* showed a statistically significant or substantively important effect.

**Mixed effects:** Evidence of inconsistent effects as demonstrated through either of the following criteria.

- Criterion 1: At least one study showing a statistically significant or substantively important *positive* effect, and at least one study showing a statistically significant or substantively important *negative* effect, but no more such studies than the number showing a statistically significant or substantively important *positive* effect.

**Not met.** No studies of *STEP* showed a statistically significant or substantively important effect.

### OR

- Criterion 2: At least one study showing a statistically significant or substantively important effect, and more studies showing an *indeterminate* effect than showing a statistically significant or substantively important effect.

**Not met.** No studies of *STEP* showed a statistically significant or substantively important effect.

1. For rating purposes, the WWC considers the statistical significance of individual outcomes and the domain-level effect. The WWC also considers the size of the domain-level effect for ratings of potentially positive or potentially negative effects. For a complete description, see the WWC Intervention Rating Scheme.

(continued)

## Appendix A5.2 STEP rating for the progressing in school domain *(continued)*

**Potentially negative effects:** Evidence of a negative effect with no overriding contrary evidence.

- Criterion 1: At least one study showing a statistically significant or substantively important *negative* effect.

**Not met.** No studies of *STEP* showed a statistically significant or substantively important effect.

**AND**

- Criterion 2: No studies showing a statistically significant or substantively important *positive* effect, or more studies showing statistically significant or substantively important *negative* effects than showing statistically significant or substantively important *positive* effects.

**Met.** No studies of *STEP* showed a statistically significant or substantively important effect.

**Negative effects:** Strong evidence of a negative effect with no overriding contrary evidence..

- Criterion 1: Two or more studies showing statistically significant *negative* effects, at least one of which met WWC evidence standards for a *strong* design.

**Not met.** No studies of *STEP* showed a statistically significant or substantively important effect.

- Criterion 2: No studies showing statistically significant or substantively important *positive* effects.

**Met.** No studies of *STEP* showed a statistically significant or substantively important effect.

## Appendix A6 Extent of evidence by domain

Outcome domain	Number of studies	Sample size		Extent of evidence <sup>1</sup>
		Schools	Students	
Staying in school	1	>2	2,588	Small
Progressing in school	1	>2	2,558	Small

1. A rating of “medium to large” requires at least two studies and two schools across studies in one domain and a total sample size across studies of at least 350 students or 14 classrooms. Otherwise, the rating is “small.”