

# What Works Clearinghouse



## Middle College High School

**Program description** *Middle College High Schools* are alternative high schools located on college campuses that aim to help at-risk students complete high school and encourage them to attend college. The schools offer a project-centered, interdisciplinary

curriculum, with an emphasis on team teaching, individualized attention, and development of critical thinking skills. Students are also offered support services, including specialized counseling, peer support, and career experience opportunities.

**Research** One study of *Middle College High School* met the What Works Clearinghouse (WWC) evidence standards. This randomized controlled trial included 394 students in the Seattle Public Schools who were assigned to an intervention group that was offered admission to the alternative high school or a control

group that was not. Control group students were free to participate in other regular and alternative high schools operated by the school district and in General Educational Development (GED) programs. Most control group students participated in one of these other education options.<sup>1</sup>

**Effectiveness** *Middle College High School* was found to have no discernible effects on staying in school or completing school.

	<i>Staying in school</i>	<i>Progressing in school</i>	<i>Completing school</i>
<b>Rating of effectiveness</b>	No discernible effects	na	No discernible effects
<b>Improvement index<sup>2</sup></b>	Average: -3 percentile points	na	Average: +2 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 index for all findings across the study.

## Absence of conflict of interest

The *Middle College High School* study summarized in this intervention report was prepared by staff of Mathematica Policy Research, Inc. (MPR). Because the principal investigator for the WWC dropout prevention review is also an MPR staff member and the lead study author, 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 and by members of the WWC Technical Review Team and external peer reviewers.

## Additional program information

### Developer and contact

Information on the history of the *Middle College High School* model and current resources for program implementation are available from the Middle College National Consortium (MCNC). Web: <http://www.mcnc.us>. Telephone: (718) 361-1981.

### Scope of use

The MCNC reports that, as of December 2006, the *Middle College High School* program was operating in 31 school districts in 12 states.

### Description of intervention

*Middle College High Schools* are alternative high schools that operate as formal collaborations between local school districts and colleges. The schools, which offer regular high school diplomas, are small—with fewer than 100 students per grade—and are located on college campuses. Faculty and students have access to the college's educational resources and facilities, and students can take college-level courses. The curriculum emphasizes development of critical thinking skills and connecting what is learned to real-world experiences. These schools typically

offer career-oriented courses and internships. In addition, students often must complete a community service requirement to graduate. Classes are taught by high school teachers from the local school district. Faculty teach collaboratively and integrate material across disciplines. Within team-taught classes, students often participate in collaborative learning groups. Student-to-staff ratios are substantially lower than in traditional high school programs, allowing more individual attention. *Middle College High Schools* often use alternative assessment strategies, such as portfolios and oral presentations. They emphasize democratic school governance and use school committees—including administrators, faculty, parents, students, and college and community representatives—to provide input and guidance on school operations.

### Cost

Researchers estimated the cost of *Middle College High School* in Seattle to be \$965 a student per month of program participation—about 50% higher than the cost of educating a student in a regular school within the district (estimated to be \$649 a month).<sup>3</sup>

## Research

The WWC reviewed six studies of the effectiveness of *Middle College High School*. One study (Dynarski, Gleason, Rangarajan, & Wood, 1998) was a randomized controlled trial that met WWC evidence standards. The other five studies did not meet WWC evidence screens.

The Dynarski et al. (1998) study of *Middle College High School* was part of a larger evaluation examining the effectiveness of 16 middle school and high school dropout prevention programs. The *Middle College High School* study used a random assignment design and included 395 students who applied

3. See Rosenberg, L., & Hershey, A. (1995). *The cost of dropout prevention programs*. Princeton, NJ: Mathematica Policy Research, Inc. Costs have been converted to 2006 dollars using the Consumer Price Index.

## Research (continued)

to attend the alternative high school, which was operated by Seattle Public Schools in cooperation with Seattle Central Community College. Study participants were generally older students—their average age was just under 18—who were over-age for grade or had dropped out of school. Students assigned to the control group did not receive *Middle College High School*

services, but they were free to participate in other regular and alternative education programs in the community. Most control group students participated in one of these other education options. Findings presented in this report were drawn from a follow-up survey administered about two years after random assignment.<sup>4</sup>

## 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 Dynarski, Gleason, Rangarajan, and Wood (1998) study examined outcomes in two of these domains.

*Staying in school.* Dynarski et al. (1998) reported that by the end of the second year after random assignment, 36% of students in the *Middle College High School* group had dropped out of school, compared with 33% of control group students—a difference that was not statistically significant. In addition, this difference was not large enough to be considered substantively important based on WWC standards.

*Completing school.* Dynarski et al. (1998) found that 40% of students in the *Middle College High School* group had earned a

high school diploma or GED certificate two years after random assignment, compared with 38% of control group students—a difference that was not statistically significant or substantively important.<sup>5</sup>

### 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,<sup>6</sup> the size of the difference between participants in the intervention and comparison conditions, and the consistency in findings across studies (see the [WWC Intervention Rating Scheme](#)).

## The WWC found *Middle College High School* to have no discernible effects on staying 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 entirely based on the size of the effect, regardless of the statistical significance of the effect, the study design, or the

4. An additional follow-up survey was conducted at the end of year three with an early cohort of study participants. Because of relatively low response rates to this survey, as well as evidence of substantial intervention-control differences in baseline characteristics among respondents, these third-year results were not used in the WWC rating of the effectiveness of *Middle College High School*. These results are summarized in Appendices A4.2 and A4.3.
5. In addition, analysis of third-year survey data, available for an early cohort, indicates no statistically significant effect of the intervention on completing school after three years. However, these longer-term results suggest that *Middle College High School* may have shifted these completions toward receipt of regular high school diplomas and away from receipt of GED certificates. Appendix A4.3 presents these longer-term results.
6. 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 *Middle College High School*, no corrections for clustering or multiple comparisons were needed.

**The WWC found *Middle College High School* to have no discernible effects on staying in school or completing school** *(continued)*

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 was -3 percentile points for staying in school and +2 percentile points for completing school in the one study that passed WWC evidence screens.

### Summary

The WWC reviewed six studies on *Middle College High School*. One study met WWC standards; the others did not meet WWC evidence screens. Based on this one study, the WWC found the intervention to have no discernible effects on staying in school or completing school. The evidence presented in this report is limited and may change as new research emerges.

### References

#### Met WWC evidence standards

Dynarski, M., Gleason, P., Rangarajan, A., & Wood, R. (1998). *Impacts of dropout prevention programs: Final report. A research report from the School Dropout Demonstration Assistance Program evaluation*. Princeton, NJ: Mathematica Policy Research, Inc.

#### Additional sources:

Dynarski, M., & Gleason, P. (1998). *How can we help? What we have learned from evaluations of federal dropout-prevention programs*. Princeton, NJ: Mathematica Policy Research, Inc.

Hershey, A., Adelman, N., & Murray, S. (1995). *Helping kids succeed: Implementation of the School Dropout Demonstration Assistance Program*. Princeton, NJ: Mathematica Policy Research, Inc.

Rosenberg, L., & Hershey, A. (1995). *The cost of dropout prevention programs*. Princeton, NJ: Mathematica Policy Research, Inc.

#### Did not meet WWC evidence screens

Cavalluzzo, L., Jordan, W., & Corallo, C. (2002). *Case studies of high schools on college campuses: An alternative to the traditional high school program*. Charleston, WV: AEL.<sup>7</sup>

Cullen, C. L. (1991). *Middle College High School: Its organization and effectiveness*. (Doctoral dissertation, Columbia University). *Dissertation Abstracts International*, 52, 358.<sup>8</sup>

Heard, F. B. (1988). *An assessment of the Tennessee Statewide School-College Collaborative for Educational Excellence: The middle college high school*. (Doctoral dissertation, Nova University). (ERIC Document Reproduction Service No. ED294637).<sup>8</sup>

Lieberman, J. E. (1986). *Middle College: A ten year study*. (ERIC Document Reproduction Service No. ED271153).<sup>8</sup>

Lieberman, J. E. (1992). *A final report to the Ford Foundation on Middle College replication*. Long Island City, NY: LaGuardia Community College.<sup>9</sup>

**For more information about specific studies and WWC calculations, please see the [WWC Middle College High School Technical Appendices](#).**

7. The study did not use a comparison group.

8. Lack of evidence of baseline equivalence: the study, which used a quasi-experimental design, did not establish that the comparison and intervention groups were equivalent at baseline.

9. The outcome measures examined in this study are not relevant to this review.