



# WWC Single Study Review

A review of the design and summary of findings for an individual study



January 2016

## WWC Review of the Report “Curricular Redesign and Gatekeeper Completion: A Multi-College Evaluation of the California Acceleration Project”<sup>1,2,3</sup>

The findings from this review do not reflect the full body of research evidence on the *California Acceleration Project*.

### What is this study about?

The study authors examined the impact of the *California Acceleration Project (CAP)* on successful completion of college-level math and English courses for students enrolled in developmental coursework in California community colleges. The CAP promotes curricular redesign, a form of course acceleration that focuses developmental course content on the skills required for college-level courses. By utilizing course acceleration principles, traditional developmental sequences can be shortened to one or two courses. The goal of course acceleration in this context is to increase the rate at which students complete their developmental requirements and become eligible to enroll in college-level courses (also referred to as “transfer-level” courses) by allowing them fewer chances to either drop out of or fail the developmental sequence.

In this quasi-experimental design study, the authors conducted separate analyses for students enrolled in developmental math and students enrolled in developmental English. The developmental math intervention group was composed of students who enrolled in accelerated developmental math during the 2011–12 academic year. The comparison group was composed of students enrolled in traditional developmental math in the same academic year. The intervention and comparison groups were matched

on current developmental level and prior success in math. The authors determined that 653 accelerated developmental math students and 23,607 traditional developmental math students were eligible for inclusion in the analysis. Sixty-four percent of the intervention group and 73% of the comparison group belonged to a racial or ethnic minority group.

The developmental English intervention group was composed of students enrolled in accelerated developmental English. The comparison group similarly consisted of students enrolled in traditional developmental English, and the intervention and comparison groups were matched on current developmental level and prior success in English. The authors determined that 1,836 accelerated English students and 22,354 traditional developmental English students were eligible for inclusion in the analysis. Eighty-nine percent of the intervention group and 80% of the comparison group belonged to a racial or ethnic minority group.

All but one of the 16 participating CAP colleges implemented a one-step acceleration design that combined all developmental classes in a sequence into one course. The remaining college implemented a two-step design that grouped together students in courses that were four and three levels below college-level separately from students enrolled in courses two and one level below college-level. Faculty received training on acceleration coursework

principles but were free to implement the redesign principles as they deemed appropriate.

Study authors examined the proportion of students successfully completing college-level coursework in math or English by the end of the spring 2013 semester.

### WWC Rating

#### ***The research described in this report does not meet WWC group design standards***

Because students were not randomly assigned to conditions and no pretest measures were available, demonstration of baseline equivalence on both prior academic achievement and socioeconomic status was required for the study to meet WWC group design standards with reservations.

The authors reported the proportion of students who graduated high school. However, only continuous measures of academic achievement are eligible for demonstrating baseline equivalence for this review protocol. Therefore, the study cannot meet WWC group design standards, and the findings from this study are not presented in this WWC report.

### Features of the *California Acceleration Project*

The *California Acceleration Project* exposed students in accelerated developmental classes to a developmental course sequence that reduced the number of courses necessary to pass before attempting a college-level course.

Faculty teaching accelerated developmental courses received training on accelerated course structure and coursework design principles but were free to implement the course as they saw fit. These principles included: just-in-time remediation, an exclusive focus on the skills required for college-level course success, increased critical thinking requirements, increased reading and writing requirements, positively engaging students, teaching in a context meaningful to students, and using themes to connect assignments.

### What did the study find?

None of the analyses presented in this study meet WWC standards and therefore, the study findings are not presented in this WWC report.

### Endnotes

<sup>1</sup> Hayward, C., & Willett, T. (2014). *Curricular redesign and gatekeeper completion: A multi-college evaluation of the California Acceleration Project*. Berkeley: The Research and Planning Group for California Community Colleges.

<sup>2</sup> Single study reviews examine evidence published in a study (supplemented, if necessary, by information obtained directly from the authors) to assess whether the study design meets WWC design standards. The review reports the WWC's assessment of whether the study meets WWC design standards and summarizes the study findings following WWC conventions for reporting evidence on effectiveness. This study was reviewed using the review protocol for Studies of Interventions for Developmental Students in Postsecondary Education (version 3.1).

<sup>3</sup> This study was originally reviewed for a grant competition, and this single study review is an update of the original review. The study rating has been changed from *meets WWC group design standards with reservations* to *does not meet WWC group design standards*. The review protocol for Studies of Interventions for Developmental Students in Postsecondary Education (version 3.1) does not allow binary baseline measures of academic achievement to be used for the purpose of establishing baseline equivalence. Therefore, this study fails to demonstrate baseline equivalence on an eligible measure of prior academic achievement. The study rating has been changed to reflect this policy.

### Recommended Citation

U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2016, January). *WWC review of the report: Curricular redesign and gatekeeper completion: A multi-college evaluation of the California Acceleration Project*. Retrieved from <http://whatworks.ed.gov>

### Glossary of Terms

<b>Attrition</b>	Attrition occurs when an outcome variable is not available for all participants initially assigned to the intervention and comparison groups. The WWC considers the total attrition rate and the difference in attrition rates across groups within a study.
<b>Clustering adjustment</b>	If intervention assignment is made at a cluster level and the analysis is conducted at the student level, the WWC will adjust the statistical significance to account for this mismatch, if necessary.
<b>Confounding factor</b>	A confounding factor is a component of a study that is completely aligned with one of the study conditions, making it impossible to separate how much of the observed effect was due to the intervention and how much was due to the factor.
<b>Design</b>	The design of a study is the method by which intervention and comparison groups were assigned.
<b>Domain</b>	A domain is a group of closely related outcomes.
<b>Effect size</b>	The effect size is a measure of the magnitude of an effect. The WWC uses a standardized measure to facilitate comparisons across studies and outcomes.
<b>Eligibility</b>	A study is eligible for review if it falls within the scope of the review protocol and uses either an experimental or matched comparison group design.
<b>Equivalence</b>	A demonstration that the analytic sample groups are similar on observed characteristics defined in the review area protocol.
<b>Improvement index</b>	Along a percentile distribution of individuals, the improvement index represents the gain or loss of the average individual due to the intervention. As the average individual starts at the 50th percentile, the measure ranges from -50 to +50.
<b>Multiple comparison adjustment</b>	When a study includes multiple outcomes or comparison groups, the WWC will adjust the statistical significance to account for the multiple comparisons, if necessary.
<b>Quasi-experimental design (QED)</b>	A quasi-experimental design (QED) is a research design in which study participants are assigned to intervention and comparison groups through a process that is not random.
<b>Randomized controlled trial (RCT)</b>	A randomized controlled trial (RCT) is an experiment in which eligible study participants are randomly assigned to intervention and comparison groups.
<b>Single-case design (SCD)</b>	A research approach in which an outcome variable is measured repeatedly within and across different conditions that are defined by the presence or absence of an intervention.
<b>Standard deviation</b>	The standard deviation of a measure shows how much variation exists across observations in the sample. A low standard deviation indicates that the observations in the sample tend to be very close to the mean; a high standard deviation indicates that the observations in the sample are spread out over a large range of values.
<b>Statistical significance</b>	Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups. The WWC labels a finding statistically significant if the likelihood that the difference is due to chance is less than 5% ( $p < .05$ ).
<b>Substantively important</b>	A substantively important finding is one that has an effect size of 0.25 or greater, regardless of statistical significance.

Please see the [WWC Procedures and Standards Handbook \(version 3.0\)](#) for additional details.



Intervention  
Report



Practice  
Guide



Quick  
Review



Single Study  
Review

A **single study review** of an individual study includes the WWC's assessment of the quality of the research design and technical details about the study's design and findings.

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