

WWC Review of the Report “Efficacy of the Responsive Classroom Approach: Results From a 3-Year, Longitudinal Randomized Controlled Trial”^{1,2}

The findings from this review do not reflect the full body of research evidence on *Responsive Classroom*.

What is this study about?

The study authors examined the impact of *Responsive Classroom*, a professional development program for teachers, on student achievement.³ This study took place in a large, ethnically and socioeconomically diverse district in a mid-Atlantic state. The intervention was implemented during 3 school years from 2008 to 2011.

Study authors randomly assigned 12 elementary schools to implement *Responsive Classroom* for 3 years and another 12 elementary schools to a comparison group that would not implement *Responsive Classroom* during that period. Intervention group teachers began receiving training for *Responsive Classroom* in summer 2008. However, the researchers discovered that some teachers in two of the comparison schools also received training for *Responsive Classroom*. As a result, the authors randomly selected one of these two schools and re-assigned it to the intervention group, so that the intervention group ultimately consisted of 13 schools and the comparison group consisted of 11 schools.

Study authors assessed the effectiveness of *Responsive Classroom* by comparing student performance in math and reading on a state standardized test in fifth grade.⁴ These students were in third grade during the 2008–09 school year, the first year that *Responsive Classroom* was implemented in the intervention group. There were about 1,000 students in the intervention group and 1,000 students in the comparison group.

WWC Rating

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

The study authors altered the initial random assignment of schools and did not account for this in the analysis. The WWC requires that the analysis of randomized controlled trials use the initial random assignment or adjust for changes to the random assignment. Consequently, the WWC considers the random assignment process to have been compromised, and therefore, requires a demonstration of baseline equivalence of the analytic sample in order for the study to be eligible to meet WWC group design standards with reservations.

The WWC determined that the analytic samples were not equivalent at baseline on math achievement.⁵ Baseline equivalence could not be demonstrated on the reading outcome because a reading pretest was not administered. Therefore, the study does not meet WWC group design standards, and the findings from the study are not presented in this WWC report.

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.

Features of *Responsive Classroom*

Responsive Classroom is a professional development program offered by the Northeast Foundation for Children. Its goal is to provide teachers with strategies that support positive classroom environments characterized by respectful, caring social interactions and engaging academic instruction. Classroom practices promoted by *Responsive Classroom* include gathering the class each morning to greet each other and prepare for the day, creating classroom rules, and using positive language with students.

Endnotes

¹ Rimm-Kaufman, S. E., Larsen, R. A. A., Baroody, A. E., Curby, T. W., Ko, M., Thomas, J. B., Merritt, E. G., Abry, T., & DeCoster, J. (2014). Efficacy of the Responsive Classroom approach: Results from a 3-year, longitudinal randomized controlled trial. *American Educational Research Journal*, 1–37. doi: 10.3102/0002831214523821

² 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 single study review protocol, version 2.0. For outcome domains and baseline equivalence requirements, the review referred to the WWC Evidence Review Protocol for Primary Mathematics (version 3.0) and the WWC Evidence Review Protocol for Adolescent Literacy Interventions (grades 4–12) (version 2.1). A quick review of this study was released on April 24, 2014, and this report is the follow-up review that replaces that initial assessment. The WWC rating applies only to the study outcomes that were eligible for review under these topic areas.

³ The study authors provided additional information to the WWC clarifying that the study addressed school-level research questions applying to students who were in the study schools at the time of random assignment, as well as students who joined the study schools after random assignment.

⁴ Three outcomes included in the study are not described in this WWC report. Three measures of implementation fidelity (observed and teacher-reported) were analyzed, as well as a single variable combining these measures using confirmatory factor analysis. The study includes analyses that relate implementation fidelity to student math outcomes. These types of mediation analyses do not fall under the purview of the WWC, and thus are excluded from this review.

⁵ Information on baseline equivalence was obtained from the authors.

Recommended Citation

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Glossary of Terms

Attrition	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.
Clustering adjustment	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.
Confounding factor	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.
Design	The design of a study is the method by which intervention and comparison groups were assigned.
Domain	A domain is a group of closely related outcomes.
Effect size	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.
Eligibility	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.
Equivalence	A demonstration that the analytic sample groups are similar on observed characteristics defined in the review area protocol.
Improvement index	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.
Multiple comparison adjustment	When a study includes multiple outcomes or comparison groups, the WWC will adjust the statistical significance to account for the multiple comparisons, if necessary.
Quasi-experimental design (QED)	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.
Randomized controlled trial (RCT)	A randomized controlled trial (RCT) is an experiment in which eligible study participants are randomly assigned to intervention and comparison groups.
Single-case design (SCD)	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.
Standard deviation	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.
Statistical significance	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% ($p < .05$).
Substantively important	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.