

## Charter schools: Knowledge Is Power Program (KIPP) Pre-K to 12 Education

Literature review updated August 2013.

As part of WSIPP's research approach to identifying evidence-based programs and policies, WSIPP determines "what works" (and what does not work) to improve outcomes using an approach called meta-analysis. For detail on our methods, see our [Technical Documentation](#). At this time, WSIPP has not yet calculated benefits and costs for this topic.

**Program Description:** The Knowledge is Power Program (KIPP) is a network of public charter schools operating in 20 states and the District of Columbia. The schools predominantly enroll low-income and minority students. The studies included in this analysis are of KIPP middle schools around the country and measure the impact of attending a KIPP school compared to a traditional public school. The evidence suggests that KIPP charter schools improve test scores in both reading and math. We present the findings for reading scores here.

### Meta-Analysis of Program Effects

Outcomes measured	No. of effect sizes	Treatment N	Adjusted effect size and standard error			Unadjusted effect size (random effects model)	
			ES	SE	Age	ES	p-value
Test scores	9	16665	0.053	0.011	11	0.053	0.001

Meta-analysis is a statistical method to combine the results from separate studies on a program, policy, or topic in order to estimate its effect on an outcome. WSIPP systematically evaluates all credible evaluations we can locate on each topic. The outcomes measured are the types of program impacts that were measured in the research literature (for example, crime or educational attainment). Treatment N represents the total number of individuals or units in the treatment group across the included studies.

An effect size (ES) is a standard metric that summarizes the degree to which a program or policy affects a measured outcome. If the effect size is positive, the outcome increases. If the effect size is negative, the outcome decreases.

Adjusted effect sizes are used to calculate the benefits from our benefit cost model. WSIPP may adjust effect sizes based on methodological characteristics of the study. For example, we may adjust effect sizes when a study has a weak research design or when the program developer is involved in the research. The magnitude of these adjustments varies depending on the topic area.

WSIPP may also adjust the second ES measurement. Research shows the magnitude of some effect sizes decrease over time. For those effect sizes, we estimate outcome-based adjustments which we apply between the first time ES is estimated and the second time ES is estimated. We also report the unadjusted effect size to show the effect sizes before any adjustments have been made. More details about these adjustments can be found in our [Technical Documentation](#).

## Citations Used in the Meta-Analysis

- Angrist, J.D., Dynarski, S.M., Kane, T.J., Pathak, P.A., & Walters, C.R. (2012). *Who benefits from KIPP? Journal of Policy Analysis and Management*. Advance online publication. doi: 10.1002/pam.21647.
- Ross, S. M., McDonald, A. J., Alberg, M., & McSparrin-Gallagher, B. (2007). Achievement and Climate Outcomes for the Knowledge Is Power Program in an Inner-City Middle School. *Journal of Education for Students Placed at Risk*, 12(2): 137-165.
- Tuttle, C.C., Gill, B., Gleason, P., Knechtel, V., Nicholas-Barrer, I., & Resch, A. (2013). *KIPP middle schools: Impacts on achievement and other outcomes*. Washington DC: Mathematica Policy Research.
- Woodworth, K.R., David, J.L., Guha, R., Wang, H., & Lopez-Torkos, A. (2008). *San Francisco Bay area KIPP schools: A study of early implementation and achievement (Final Report)*. Menlo Park, CA: SRI International.

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Printed on 03-28-2024



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