EBI Worksheet
Complete for Each Study Included in the SIG Application

		Page Number
APA citation	Borman, G.D., Slavin, R.E., Cheung, A., Chamberlain, A., Madden, N.A., & Chambers, B. (2007). Final reading outcomes of the national randomized field trial of Success for All. *American Educational Research Journal, 44* (3), 701-731. **Note: This is a slightly older study, but we thought it was relevant since some of the schools included in the study are near our LEA (the schools were in Indianapolis, IN). We have also included some more recent studies. Link to study: tinyurl.com/SuccessForAllPDF	N/A
Intervention name	Success for All	701
What did the intervention say it would do?	Success for All is a schoolwide program for Pre-K—6 students that organizes resources to ensure that virtually every student acquires basic skills and builds on this foundation throughout the elementary grades, so that no student will be allowed to "fall between the cracks" (p.727). The main elements of the program include: schoolwide instructional processes; schoolwide curriculum: tutors; quarterly assessments and regrouping; solutions team, and facilitator.	727
Research design used	Choose one of the following: • **Randomized control trial** • Quasi-experimental design • Correlational study with statistical controls for selection bias • Other:	701

Outcome(s) measured (e.g., assessments, inventories)	Reading competency measured through Woodcock: Word Identification Word Attack Passage Comprehension	716
Number of total participants, and if applicable, number of students in each of the treatment and control groups	Total: 2,108; 18 experimental schools with 1,085 students; 17 control schools with 1,023 students	717
Are the participants in the study similar to the students/teachers in the LEA (e.g., locale, grade level, race)?	Yes, Title I schools throughout U.S., 72% free/reduced price lunch, 56% African American, 30% White, 10% Hispanic; Grades K-2. Schools in Indianapolis are included.	711
If applicable, are treatment/control groups similar on background characteristics (e.g., grade level, free/reduced price lunch, prior performance)?	Yes. The researchers conduct t-tests to compare the background characteristics of students in the two groups for the Peabody Picture Vocabulary Test, Enrollment, % female, % minority, % ESL, %SpEd and % free lunch. They did not find any statistically significant differences between the treatment and control groups.	714, 717
Did the researchers address the impact of participants who might have left the study (i.e., attrition)?	Yes. The researchers discuss in the first paragraph in the *Results* section about how they assessed attrition and found no statistically significant difference through their tests.	717
If applicable, did the researchers address other background variables in the study that could be considered confounding factors?	Yes. They used hierarchical linear modeling to address school and student-level factors.	718-720
Was the intervention implemented with fidelity? How did the researchers check for this?	Yes, teachers received 3 days of training and 16 days of on-site follow-up during the first implementation year. After that, trainers made quarterly implementation visits.	711, 716
Was there a statistically significant change in the outcome(s) as a result of the intervention?	Yes (p<0.05) for all outcomes	721
Was the change positive, with a large enough effect size (+0.25)?	Somewhat; Word identification: +0.22; Word Attack: +0.33; Passage Comprehension: +0.21; Word Identification are slightly smaller than	721-722

	the 0.25 cutoff, but since the study is so large and rigorous, this type of low effect size is to be expected.	

Terms Referenced in Worksheet:[1]

Attrition

- The loss of sample during the course of a study. It occurs when individuals initially randomly assigned in a study are not included when researchers examine the outcome of interest. Attrition is a common issue in education research, and it occurs for many reasons (e.g. a student in the study relocates to another school). Attrition occurs when an outcome variable is not available for all subjects initially assigned to the intervention and comparison groups. If a randomized controlled trial (RCT) or quasi-experimental design have high levels of attrition, the validity of the study results can be called into question.

Confounding Factor

- A component of a study that is completely aligned with one of the study conditions. For example, a study may have one intervention school and a different comparison school. In this case, it is impossible to separate how much of the observed effect was due to the intervention and how much was due to the particular school in which the intervention was used. Therefore, a study with a confounding factor cannot meet standards, as the impact cannot be attributed solely to the intervention.

Correlational Study with Statistical Controls for Selection Bias

- These designs will not include treatment and control/comparison groups, and participants are part of one large group. In these studies, researchers examine relationships among specific variables and the outcomes. Background characteristics such as gender, race/ethnicity, free/reduced price meal eligibility, prior academic performance, teacher and school characteristics, and other variables are used in these correlational studies to control for participant characteristics that might impact the outcomes, so that the potential effect of the intervention on the outcome can be measured. For example, a study in this category might examine the relationship between the hours spent by students on a new Algebra I e-learning module and their performance on the Algebra I ECAs, when controlling for student background characteristics, such as prior math performance, demographic factors, teacher experience and PD hours with this module, etc. If there are no control variables, then the study cannot be considered promising evidence.
- *Terms to look for:* Multiple linear regression, hierarchical linear modeling, structural equation modeling

Effect Size

- A standardized measure of the magnitude of an effect. The effect size represents the change (measured in standard deviations) in an average student's outcome that can be expected if that student is given the intervention. Because effect sizes are standardized, they can be compared across outcomes and studies.
- *Terms to look for:* Treatment effect, Cohen's *d*, Hedge's *g*, R^2

Quasi-Experimental Design (QED)

- A design in which one or more groups receive the intervention, and one or more groups do not receive the intervention. Participants were not randomly assigned into treatment and comparison groups. Some natural change happened, such as a newly-funded program implementation that created a group that received the treatment/intervention, and one that did not. However these groups were not randomly assigned. Other methods were used to attempt to create baseline equivalence between groups, so that each participant in the treatment group has a comparable "twin" in the group that did not receive the treatment (i.e., the comparison group). Many times, statistical

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[1] Adapted from: What Works Clearinghouse. (n.d.). *WWC | Glossary of terms.* Retrieved from
https://ies.ed.gov/ncee/wwc/Glossary/improvement%20index

processes are used to match those in the treatment group to similar participants that did not receive the intervention. Characteristics that each member of the treatment and comparison group would be matched on include gender, race/ethnicity, free/reduced price meal eligibility, prior academic performance, teacher, and school characteristics. For example, one group of 5th and 6th grade teachers receive funding to implement project-based learning at their school, while another group of 5th and 6th grade teachers did not receive funding and continue business as usual. These groups were not randomly assigned, so a study measuring the impact of the project-based learning program on outcomes would be using a quasi-experimental design. For a quasi-experimental design to be rigorous, the intervention and comparison groups must be similar, demonstrating baseline equivalence on observed characteristics, before the intervention is started.

- ***Terms to look for:*** Regression discontinuity design, time series design, propensity score matching, difference in differences

Randomized Control Trial (RCT)

- A design in which groups are created through a process that is random. Carried out correctly, random assignment results in groups that are similar on average in both observable and unobservable characteristics, and any differences in outcomes between the groups are due to the intervention alone. Participants of the study were randomly assigned into a treatment and control groups. There was also some sort of intervention (e.g., new type of instructional technique) used to change outcomes. Participants (e.g., students, teachers, schools) in the treatment group are those that receive the intervention. Participants that do not receive the intervention are those in the control group.
- ***Terms to look for:*** Randomly assigned, experimental

Statistical Significance

- The likelihood that a finding is due to chance rather than a real difference. The WWC labels a finding statistically significant if the likelihood that the difference is due to chance is less than five percent ($p = 0.05$).
- ***Terms to look for:*** Statistically significant, multiple * with a p-value <0.05