



## Definitions for Database Fields: Evaluation Resources for Supporting Effective Educator Development

The fields used in the database “**Evaluation Resources: Supporting Effective Educator Development**” are defined below. You can use these fields to narrow your search results and find resources that address specific areas of interest.

### Evaluation Life Cycle

#### Plan and Design

##### Initial Planning

Practices to consider when designing a study. Topics include how to develop a program logic model, define research questions, and select the research design.

##### Randomized Controlled Trials (RCT)

A study design in which participants are randomly assigned to either a *control group* that does not receive the intervention or to a *treatment group* that does receive the intervention.

##### Quasi-Experimental Designs (QED)

A study design in which the comparison group is made up of individuals who did not receive the intervention but had similar characteristics to the treatment group. Note that a special type of quasi-experimental group design, regression discontinuity design, is in a separate category below.

##### Regression Discontinuity Designs (RDD)

A special type of quasi-experimental design that can be applied when participants are accepted into a program intervention based on a cut-off score. Individuals just below the cut-off serve as a comparison group for those individuals just above the cut-off, or vice versa.

#### Identify and Follow Participants

##### Identify Comparison Groups

Guidance on how to identify or select a comparison group for your study. A comparison group should be as similar as possible to the treatment group. *Baseline equivalence* is the technical term used by the WWC to measure how similar the comparison group is to the treatment group.

##### Determine Sample Sizes

Guidance on how to determine the appropriate sample size for your study.

##### Recruit Study Participants

Guidance on how to recruit sites and participants (including gaining “buy-in”) for your study.

##### Address Changes in your Sample

Guidance on how to maintain study integrity when people leave or enter your study.



### **Reduce Bias in Comparison Groups**

Guidance on how to identify and avoid bias in your research design. Bias exists when it is unclear whether the intervention or another factor is responsible for the difference in outcomes between the treatment and comparison groups. *Confounding factors* is the technical term for these other factors in the WWC.

### **Collect and Store Data**

#### **Select Appropriate Outcome Measures**

Guidance on how to ensure that your outcome measures are appropriate for your research design. The WWC refers to these issues as *outcome eligibility*.

#### **Acquire and Use Administrative Data**

Guidance on issues related to identifying, getting permission to use, obtaining, and/or using existing administrative data for a research study. This may be from states, districts, schools, or other entities.

#### **Collect New Data**

Guidance related to generating original data collection for a research study, such as designing and fielding surveys.

### **Analyze Data**

#### **Combine Data Systems**

Guidance on issues related to combining data systems for analysis. This includes issues such as combining data from different sources on similar variables or pooling data across districts or states.

#### **Understand Data Analytic Models**

These resources describe models used to analyze data to determine if a program has a causal impact on the outcome of interest. Analytic models such as Hierarchical Linear Modeling, Propensity Score Matching, and Difference-in-Differences are addressed.

#### **Address Analysis Challenges**

Often statistical adjustments are required during analysis to ensure that results are valid. These resources include guidance for methods to deal with missing data, testing multiple outcomes, and cluster corrections.

### **Report and Use Findings**

#### **Report, Interpret, and Use Findings**

Guidance related to reporting and interpreting effect sizes, improvement index, statistical significance of results, and/or interaction effects.

#### **Develop Ways to Visualize Data**

Guidance and examples on how to visually depict data to more easily their meaning.



## **Additional Focus Areas**

### **Special Evaluation Topics**

#### **Low-Cost Approaches**

Guidance on low-cost approaches to evaluation, including naturally occurring experiments and use of administrative data or publicly available data sources.

#### **Short-Cycle Methods**

Guidance on short-cycle approaches to evaluation, including rapid-cycle evaluation, continuous improvement methods, and Plan-Do-Study-Act cycles.

#### **Educator Development Focus**

Guidance on evaluations that focus on educator development. This includes teacher or principal recruitment, selection, and preparation; professional development for teachers of academic subjects; and/or advanced certification and advanced credentialing.

#### **References WWC Standards**

Resource specifically refers to What Works Clearinghouse (WWC) standards.

### **Examples of Measures**

#### **Student Achievement**

Examples of measures related to student achievement outcomes. Measures may include graduation rates, reading and/or writing, math, science, college entrance exams, grade progression, or civic knowledge and skills.

#### **Student Behavior**

Examples of measures related to student behavior. Measures may include student attitudes, student attendance, student retention, discipline and behavior outcomes, student dispositions, self-efficacy, or classroom climate perception.

#### **Teacher**

Examples of measures related to teachers. Measures may include teacher quality/effectiveness measures (e.g., value-added measures), classroom observations, lesson plans, surveys of teacher knowledge and/or attitudes, teacher retention, or teacher evaluation scores.

#### **Principal/School**

Examples of measures related to principals and/or schools. Measures may include school instructional climate surveys, principal evaluation scores, school performance measures (e.g., test scores), or principal retention.

#### **District**

Examples of measures related to districts. Measures may include district value-added scores, district leadership participation, or training ratings.