

Handout 3: Research Designs

	What's Known	What's Happening	Making Connections	Making an Impact
	Descriptive	Descriptive	Correlational	Causal
Description	Summaries of previous research	Descriptions of policies, programs, implementation status, or data trends, including characteristics of individuals or groups	Studies of correlational relationships between two or more variables. Does not support causal inference	Studies to examine the effectiveness of a particular policy, program or practice. Supports causal inference. Can build on descriptive studies
Sample research questions	What evidence supports reading interventions that improve student outcomes in grades 1–3? What does the research say about online and blended learning programs that offer differentiated learning options?	What is the trend in science scores over the past five years? What are the certification characteristics of beginning teachers in the region?	How do math course-taking patterns vary by race and gender? What factors are related to differences in graduation rates across districts?	Does this after school program increase student engagement? Does this math intervention lead to improved math achievement? Do teacher evaluation policies improve student achievement outcomes?
Data collection may include:	n/a	Secondary data analysis (for example, state, district, or school administrative datasets) Document/records review	Secondary data analysis (for example, state, district, or school administrative datasets)	Primary data collection (for example, surveys, classroom observations, etc.) Secondary data analysis (for example, state, district, or school administrative datasets)
Analyses may include:	Literature review Meta-analysis	Descriptive statistics: averages, frequencies, and percentages	Differences in means test Analysis of variance Multivariate regression	Randomized controlled trials (RCTs - the gold standard), which include random assignment of intervention and control groups. Other designs, including matched comparisons or regression discontinuity, may yield biased estimates of impact.

Note: REL-funded impact studies must meet What Works Clearinghouse standards.