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How Do I Assess the Value and Quality of Research?

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Well-designed research is important for addressing major social and education policy issues: It provides insight into the structural and systemic barriers that prevent the achievement of desired policy goals, proposes or tests possible solutions, and minimizes the biases that may be introduced by relying on personal experience alone. However, it can be difficult to navigate the volume and complexity of available research studies.

This supplement (the first of two) to MDRC's brief [Evidence to Action: A Policy Perspective from Three States](#) is meant to serve as a toolkit for individuals who have little experience with research and are interested in supporting evidence-based policymaking within their communities. It summarizes information about the types of research available and how various organizations consider the quality of research, and provides questions to consider when assessing the usefulness of a research study for the context of your institution.

WHAT TYPES OF DATA AND RESEARCH CAN INFORM POLICY AND PRACTICE?

- **Descriptive quantitative data and statistical analyses:** These types of data and analyses include systematically collected numeric data indicating the characteristics, activities, and outcomes of a population or the implementation of an intervention. Statistical analyses of descriptive data may uncover trends but are not intended to identify or test causal relationships.
- **Cost studies:** Such studies use descriptive data to estimate the financial costs of an intervention or program, helping policymakers to consider the level of investment required. For more information and resources on cost studies, see the [Cost Analysis: A Starter-Kit report](#) by the Institute of Education Sciences, the [CAP Project Resources](#) page, and the [CostOut tool](#)TM produced by Teachers College at Columbia University.
- **Qualitative research:** This type of research includes such formats as interviews and open-ended surveys. It is systematically collected and analyzes a particular group's perceptions, opinions, or experiences with a specific topic.
- **Implementation studies:** These studies use qualitative research and quantitative data to assess how an intervention was implemented, the elements that are critical for success, and recommendations to improve future operations. To learn more about insights produced by implementation research, see MDRC's [Implementation Research Incubator](#).



- **Quasi-experimental studies:** Here, the use of nonrandom comparison groups or other methods is applied to *uncover* a possible causal relationship. Examples of quasi-experimental studies include pretest–posttest designs, interrupted time series, and regression discontinuity designs, with some quasi-experimental studies being more rigorous than others. The general limitations of quasi-experimental methods mean that these studies are typically considered less rigorous than experimental studies.
- **Experimental studies:** Experimental studies use methods such as a randomized controlled trial (also known as a random assignment study) to test whether a causal relationship exists. One use of a randomized controlled trial is to compare the outcomes between a program group, which is eligible to participate in an intervention, with a control group, which is not. Because the two groups of study participants are assumed to be similar at the start of the study, differences in outcomes can be attributed to the intervention with a high degree of confidence. Well-designed experimental studies are typically considered the gold standard in research and build confidence in the efficacy of policies and practices.
- **Research syntheses, literature reviews, and metaanalyses:** These formats use data collected from existing studies to conduct a new analysis in which larger trends and phenomena in the field are assessed.

HOW DO SOME ORGANIZATIONS RECOMMEND ASSESSING THE RESEARCH BACKING INTERVENTIONS?

- The National Conference of State Legislatures offers [five key questions](#) lawmakers can use to determine whether a policy is based on evidence.
- The [What Works Clearinghouse](#) (a project of the Institute of Education Sciences, which is a branch of the U.S. Department of Education) uses predefined criteria related to a research study’s design to assess whether that study is able to identify or test a causal relationship for policies and practices in early childhood, K–12, and postsecondary education. The Clearinghouse also creates [practice guides](#) that summarize the evidence base backing various policies and practices.
- The [Colorado Evidence-Based Policy Collaborative](#) provides guidance for establishing standards for evidence-based policy using a four-step evidence continuum (“opinion-based,” “theory-informed,” “evidence-informed,” and “proven”). The continuum emphasizes the iterative nature of building confidence in the effectiveness of a policy. The Collaborative prioritizes experimental and quasi-experimental research.
- The [Every Student Succeeds Act](#) (ESSA) offers funding as an incentive to use interventions supported by research. To do so, ESSA categorizes “evidence-based” interventions using four tiers of evidence (“strong,” “moderate,” “promising,” and “demonstrates a rationale”), placing a strong emphasis on experimental and quasi-experimental research methods. As an example of how ESSA

is used to incentivize the development and use of rigorous evidence, the U.S. Department of Education runs the Education Innovation and Research competitive grant program to provide institutions with funding to develop or evaluate innovations in education using evidence standards similar to those defined by ESSA.

WHAT ARE SOME CONSIDERATIONS WHEN ASSESSING THE USEFULNESS OF RESEARCH FOR MY COMMUNITY?

- Do the outcomes found in the research study align with my community’s outcomes of interest?
- Which elements of the intervention does the research suggest are the most important in driving change? How can practitioners be supported or incentivized to adopt those elements?
- Are there fundamental differences between the population in the study and our population? Do any data or research suggesting that these differences in populations may lead to different results if the intervention is replicated locally? What additional information or research is needed to determine this? For more guidance on how to consider a rigorous study’s applicability in different contexts, see [The Generalizability Puzzle](#) in the *Stanford Social Innovation Review*.
- What changes will we need to adopt to make the innovation “doable” for the individuals and institutions who will implement it? Could these changes have an impact on the effectiveness of the reform?
- How will we know if the intervention is working as intended once implemented? How can we track this information?

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