

## GUIDE 2: LEARN TO READ EVALUATIONS

### Why Randomize?

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This case study is based on “Pitfalls of Participatory Programs: Evidence from a Randomized Evaluation in India,” by Abhijit Banerjee (MIT), Rukmini Banerjee (Pratham), Esther Duflo (MIT), Rachel Glennerster (J-PAL), and Stuti Khemani (The World Bank)

J-PAL thanks the authors for allowing us to use their paper

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– why non-randomized evaluation methods may fail at estimating the counterfactual.

## LEARNING OBJECTIVE

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Learn to identify evaluation methods without being told the specific method.

- Further develop the intuition of bias.
- Explore the problem of causal inference, and the various ways of estimating the impact of a program using comparison group designs.
- Introduce the concept of selection bias and how comparison group designs are only as good as their ability to get rid of selection bias
- Show how random assignment gets rid of selection bias

## SUBJECTS COVERED

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Causality, counterfactual, impact, comparison groups, selection bias, omitted variables, randomization, equivalence and comparability

## GENERAL GUIDANCE

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This case is fictional. These press releases and other things didn't *actually* happen. But this is typical of a "methodological debate" you may see over programs. One problem people may have is understanding some of the graphs or tables, particularly the graphs in Method 1 and the regression table in Method 4. Be prepared to explain those.

The main goal of impact evaluation is to estimate what would have happened in the absence of the program. A number of methods have been used to estimate the counterfactual and to understand why experimental designs are the gold standard. We must understand the shortcomings of other approaches, which is the purpose of this case.

The main point of this case is to try to see evaluation from the perspective of 90% of IPA and JPAL's partners, and to be able to explain – IN NON-TECHNICAL LANGUAGE

## ESTIMATING THE IMPACT OF THE LEARN TO READ PROJECT

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### METHOD 1

**News Release: Read India helps children Learn to Read.**

#### Discussion Topic 1 (15 minutes)

1. What type of evaluation does this news release imply?
  2. Pre-post evaluation
3. What represents the counterfactual?
  4. The Pratham children BEFORE they had enrolled in the program.
5. What are the problems with this type of evaluation?
  6. We do not know how children who enrolled in the program would have done if they HAD NOT enrolled in the program. The counterfactual implies that these children would have remained at the same reading level throughout the course of the year. It is quite plausible, however, that children would have improved in reading even without participating in the program due to other factors. In that same year, for example, families may have had a better harvest than usual, which could have improved children's nutrition, which in turn could have improved their reading outcomes.

### METHOD 2

**Opinion: The "Read India" project not up to the mark**

#### Discussion Topic 2 (15 minutes)

1. What type of evaluation does this news release imply?

2. Post comparison of program participants and program non-participants (i.e. simple comparison of means)
3. What represents the counterfactual?
  4. Children who did not enroll in the program, whose reading outcomes were measured after the implementation of the program.
5. What are the problems with this type of evaluation?
  6. The children who enrolled in the program may be significantly different from children who did not enroll. Children who enrolled in the program are likely to be low-performing compared to their peers—after all, the program intended to target these types of children. As a result, even if the program improved their reading outcomes, the children who enrolled still may not completely catch up to their higher-performing peers. Due to this bias, it may appear as though the program was ineffective.

### METHOD 3

**Letter to the Editor: EFA should consider Evaluating Fairly and Accurately**

#### Discussion Topic 3 (15 minutes)

1. What type of evaluation does this letter imply?
  2. Difference-in-Differences
3. What represents the counterfactual?
  4. Children who did not enroll in the program, whose reading outcomes were measured both before and after the implementation of the program (in order to obtain their improvement in reading level over the course of the year).
5. What are the problems with this type of evaluation?
  6. Children who enrolled in the program are likely to be low-performing compared to their peers. As a

result, starting from a lower initial reading level, these children are likely to improve more than unenrolled children because they have more room for improvement. This factor may bias our results upward.

## **METHOD 4**

**The numbers don't lie, unless your statisticians are asleep**

### **Discussion Topic 4**

(15 minutes)

7. What type of evaluation does this report imply?
    8. Multivariate regression
  9. What represents the counterfactual?
    10. Children who did not enroll in the program, controlling for (or holding constant) their age, sex, grade level, and parents' education level.
  11. What are the problems with this type of evaluation?
    12. Despite controlling for many confounding variables, it is likely that some (potentially unmeasured or immeasurable) variables that are correlated with program enrollment have not been included (i.e. omitted variables bias). Examples include motivation or other unobserved factors. The children who enrolled in the program were not randomly assigned to the program, so we are unable to account for these other factors. Due to this "selection effect", our results could be biased.
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