Evaluation: What, Why, When

Rachel Glennerster

J-PAL

povertyactionlab.org
Aid optimists

“I have identified the specific investments that are needed [to end poverty]; found ways to plan and implement them; [and] shown that they can be affordable.”

Jeffrey Sachs
End of Poverty
"After $2.3 trillion over 5 decades, why are the desperate needs of the world's poor still so tragically unmet?

Isn't it finally time for an end to the impunity of foreign aid?"

Bill Easterly
The White Man’s Burden
What goes into policymaking?

- Ideology
  - Own
  - External

- Knowledge
  - Evidence
  - Experience
  - Personal
  - Collective

- Support
  - Budget
  - Political
  - Capacity

Programs /Policies
Why focus on impact evaluation?

• Surprisingly little hard evidence on what works

• Can do more with given budget with better evidence

• If people knew money was going to programs that worked, could help increase pot for anti-poverty programs

• Instead of asking “do aid/development programs work?” should be asking:
  – Which work best, why and when?
  – How can we scale up what works?
Course Overview

1. Why evaluate? What is evaluation? When?
2. Outcomes, indicators and measuring impact
3. Impact evaluation – why randomize
4. How to randomize
5. Sampling and sample size
6. Analysis and inference
7. RCTs: Start to Finish
Lecture Overview

• Why evaluate? What makes a good evaluation?
  – What do we hope to learn?

• What do different type of evaluation do?
  – Understanding the program
  – Impact evaluation
  – Defining impact (preview)

• When to do a randomized evaluation?
Objective of evaluation

- Lesson learning
  - Beneficiaries
  - Program
  - Organization
  - World

- Accountability

- Reduced poverty through more effective programs

- Different types of evaluation contribute to these different objectives of evaluation
What makes a good evaluation?

• Ask the right questions
  – For accountability
  – For lesson learning

• Answers those questions in unbiased and definitive way

• To do that you need a model:
  logical framework/theory of change
  – Who is the target?
  – What are their needs?
  – What is the program seeking to change?
  – What is the precise program or part of program being evaluated?
Eg: community mobilization for education

Logical Framework

Needs

Input

Output

Outcome

Impact

Long-term Goal

Nearly 50% of children in rural India are functionally illiterate, despite being enrolled in school.

NGO mobilizes community to monitor teacher attendance and activity

Parents visit schools daily and report teacher absence or failure to teach

Teachers attend school more regularly; and teach when in school

Higher rates of literacy among school children

Improved Educational outcomes and career opportunities
The different types of evaluation

- Program Evaluation
- Monitoring & Evaluation
- Impact Evaluation
- Randomized Evaluation
Different levels of program evaluation

- Needs Assessment
- Program Theory Assessment
- Process evaluation
- Impact evaluation
- Cost-benefit/Cost-effectiveness analysis
Eg: community mobilization for education

Needs assessment
Program evaluation

Needs

Nearly 50% of children in rural India are functionally illiterate, despite being enrolled in school.

Input

NGO mobilizes community to monitor teacher attendance and activity

Process evaluation

Output

Parents visit schools daily and report teacher absence or failure to teach

Impact evaluation

Outcome

Teachers attend school more regularly; and teach when in school

Long-term Goal

Impact (primary outcome)

Higher rates of literacy among school children

Improved Educational outcomes and career opportunities

Impact

Higher illiterate, among teacher absence or and teach when in school.

Nearly 50% of children in rural India are functionally illiterate, despite being enrolled in school.

Process evaluation

Impact evaluation

Long-term Goal
Program Evaluation: community mobilization in education
Needs Assessment

- Clear sense of target population
- Clear sense of need program will fill
- Clear articulation of program benefits
- Clear sense of alternatives
Program Theory Assessment

• How will the program address the needs put forth in your needs assessment?
  – What are the prerequisites to meet the needs?
  – How and why are those requirements currently lacking or failing?
  – How does the program intend to target or circumvent shortcomings?
  – What services will be offered?
Process Evaluation

- Are basic tasks being completed?
- Are the services being delivered?
- Is the intervention reaching the target population?
  - Is the intervention being completed well or efficiently and to the beneficiaries’ satisfaction?
Impact Evaluation

- Evaluation (M&E)
- Program Evaluation
- Impact Evaluation
Impact Evaluation

- The program happened, how did it change lives?
- What does Theory of Change say we might expect to change?
- Primary outcome (impact): did community monitoring cause children to learn more (e.g. measured by test scores)?
- Also distributional questions such as, did the program impact some children more than others?
How to measure impact?

- What would have happened in the absence of the program?
- Take the difference between
  
  what happened (with the program) ...and
  
  - what would have happened (without the program)
  
  = IMPACT of the program
Impact: What is it?

Primary Outcome vs. Time

- Intervention
- Counterfactual
- Impact

21
Constructing the counterfactual

• Counterfactual is often constructed by selecting a group not affected by the program

• Randomized:
  – Use random assignment of the program to create a control group which mimics the counterfactual.

• Non-randomized:
  – Argue that a certain excluded group mimics the counterfactual.
How impact differs from process?

• When we answer a process question, we need to describe what happened.

• When we answer an impact question, we need to compare what happened to what would have happened without the program.
Methodologies in impact evaluation

• Experimental:
  – Randomized Evaluations

• Quasi-experimental
  – Instrumental Variables
  – Regression Discontinuity Design

• Non-experimental
  – Pre-post
  – Difference in differences
  – Regression
  – Matching
Preview: why randomize?
Random sampling and random assignment

Randomly *sample* from area of interest
Random sampling and random assignment

Randomly sample from area of interest

Randomly assign to treatment and control

Randomly sample from both treatment and control
Linking back to objectives for evaluation

- Accountability
- Lesson learning
- Reduced poverty through more effective programs
- **Solid reliable impact evaluations are the building blocks for more general lesson learning**
Learning from impact evaluations

• Learning from a single study
• Learning from an accumulation of studies
• We learn more if we place each evaluation inside a general learning strategy, helps us be explicit about
  – questions we want to answer
  – hypotheses we want to test
Evaluation and cost-benefit analysis

- Needs assessment gives you the metric for measuring impact
- Process evaluation gives you the costs of all the inputs
- Impact evaluation gives you the quantified benefits
- Identifying alternatives allows for comparative cost benefit
Eg: Comparative cost effectiveness

Figure 1:

J-PAL COST EFFECTIVENESS: additional years of student attendance per $100 spent
www.povertyactionlab.org

- INFORMATION
- HEALTH INTERVENTIONS
- INCENTIVES/REDUCED COSTS
- MULTIPLE OUTCOMES

<table>
<thead>
<tr>
<th>Project</th>
<th>Additional Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information on Returns MADAGASC.</td>
<td>28.6 years §</td>
</tr>
<tr>
<td>Deworming at School KENYA</td>
<td>3.4 years §</td>
</tr>
<tr>
<td>Iron &amp; Deworming INDIA</td>
<td>2.8 years §</td>
</tr>
<tr>
<td>School Meals KENYA</td>
<td>1.4 years §</td>
</tr>
<tr>
<td>Girls’ Merit Scholarships KENYA</td>
<td>1 year</td>
</tr>
<tr>
<td>Subsidized Uniforms KENYA</td>
<td>.09 years §</td>
</tr>
<tr>
<td>CCTs for Secondary Ed. MEXICO</td>
<td>.02 years §</td>
</tr>
<tr>
<td>CCTs for Primary Ed. MEXICO</td>
<td></td>
</tr>
</tbody>
</table>

31
When to do a randomized evaluation?

• When there is an important question you want/need to know the answer to
• Timing--not too early and not too late
• Program is representative not gold plated
  – Or tests an basic concept you need tested
• Time, expertise, and money to do it right
• Develop an evaluation plan to prioritize
When NOT to do an RE

• When the program is premature and still requires considerable tinkering to work well
• When the project is on too small a scale to randomize into two “representative groups”
• If a positive impact has been proven using rigorous methodology and resources are sufficient to cover everyone
• After the program has already begun and you are not expanding elsewhere
Developing an evaluation strategy

- Determine key questions for your organization
- How many can you already answer?
- Select top priority questions for impact evaluation
- Establish plan for answering them
- With key questions answered from impact evaluations, process evaluation can give your overall impact
- A few high quality impact studies are worth more than many poor quality ones
- If you ask the right question, more likely to use it