Theory of Change in Program Evaluation

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Presentation Overview

1. Review Evaluation and Where Does Theory of Change Fit In?
2. Building a Theory of Change in 6 Steps
3. Why is Theory of Change Important?
4. Case Exercise
WHAT IS EVALUATION AND WHERE DOES THEORY OF CHANGE FIT IN?
What is Evaluation?

- Evaluation
- Program Evaluation
- Impact Evaluation
Program Evaluation
Program Evaluation

- Impact Evaluation
- Program Evaluation
- Evaluation
## Components of Program Evaluation

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BUILDING A THEORY OF CHANGE (IN 6 STEPS)
What is a Theory of Change (ToC)?

Definition

• A theory of change is a structured approach used in the design and evaluation of social programs to explore change and how it happens. It maps the logical chain of how program inputs achieve changes in outcomes.

• Building a theory of change with solid theoretical foundations and widespread buy-in requires organizations to invest time and resources into a process with multiple steps and participation at all levels of the program.
Causal Hypothesis

Q: How do I expect results to be achieved?

A: If [inputs] produce [outputs] this should lead to [outcomes] which will ultimately contribute to [goal].
Theory of Change Components

**Inputs/Program Activities**
What we do as a part of the Program - deliver, teach, offer loans, etc.

**Outputs**
Tangible products or services produced as a result of the activities - usually can be counted.

**Intermediate outcomes**
Short-term behavioral changes that result from the outputs - preventive health habits, usage of tablets.

**Impact**
Long-term changes that result from outcomes – the result of the Program.
6 Steps to Building a ToC

1. Situation analysis – Specifying the context
2. Set the Program goal
3. Design the Program/product
4. Map the causal pathway
5. Design SMART indicators
6. Make assumptions explicit
EXAMPLE: IMMUNIZATION INCENTIVES
Step 1: Situation / Context Analysis

What it is:
• Identifying beneficiaries
• Needs, opportunities, barriers to progress
• Map relevant stakeholders
• Analyze broader political and economic context

Purpose:
• Design the right product, identify markers for success

Map opportunities, risks, broader context
Step 1: Situation / Context Analysis

- Seva Mandir program to increase immunization rates in rural Rajasthan, tested with RCT, Banerjee, Duflo, Glennerster, Kothari, 2010
- Every year, between 2 and 3 million people die from vaccine-preventable diseases
- 44 percent of children aged 1-2 years old have received the basic package of immunizations
- In rural Rajasthan, this rate is as low as 22%

Underlying Issues / Consequences

Supply side constraints:

• Average household is within 2 kilometers of the nearest clinic
• High absenteeism at government health facilities – 45% of Auxiliary Nurse Midwives are absent on any given workday (difficult to complete the treatment, 5 visits needed)

Demand side constraints:

• Cultural resistance, distrust in public health institutions
• People don’t value immunizations: short-term cost for long-term (and invisible) benefits
• Limited income: parents can’t afford to take a day off
Step 2: Setting Programme Goals

Increase full immunization rates

Increase perceived benefit of immunizations
Step 3: Design the Program

What are some solutions that achieve the program goals?
What are some Solutions?

Strengthening the existing government program

• More regular camps
• Stronger mechanisms to address staff absenteeism in clinics
• Tracking of unimmunized children and providing immunization

Information campaigns

• Explain benefits of immunization
• Address lingering doubts regarding problems arising out of immunizations

What about giving people incentives?

• Is this feasible?
Supply side solutions: Regular Immunization Camps

- A mobile immunization team conducted monthly immunization camps in each village
- Camps held on fixed date once a month from 11am-2pm
- Social workers informed mothers of the camp and the benefits of immunization
Program Solutions

Demand side solutions: Incentives

- Parents were offered 1 kilogram of lentils per immunization received
- Parents were offered a set of steel plates after the child was fully immunized
Step 4: Map the Causal Pathway

Step-by-step laying out the theory connecting your program to the goal

Series of if.../then... statements forming results chain:

Q: How do I expect Increased full immunization rates to be achieved?

A: If [inputs] produce [outputs] this should lead to [outcomes] which will ultimately contribute to [goal].

A: If incentives produces more children brought to camps this should lead to more vaccinations administered which will ultimately contribute to increased rates of full immunization.
Step 5: Develop SMART Indicators

Quantitative and qualitative

Standard of comparison (i.e. baseline v. endline)

SMART

- Specific - Ask (answer) one question at a time
- Measurable - Quantifiable, accurate, unbiased, sensitive
- Achievable - Is the indicator realistic?
- Relevant - Is this the most relevant program indicator given the needs
- Time-bound – Measured over a period of time
Step 5: Building a Theory of Change

**INPUT**
- After 6 months, camps were established and equipped to run in 90% of Programme villages. All health workers were trained to offer parents the appropriate incentives at their visit.
- Immunization Camps + Incentives
  - # of villages camps established in
  - # of trained health workers

**OUTPUT**
- After 9 months, camps were running on a monthly basis at 90% of the planned villages. Incentives were delivered to these camps
- Camps are open and incentives are delivered
  - # camps open
  - # camps incentives delivered to

**OUTCOME**
- 70-75% of Parents brought children to be immunized in the camps that were open and reported receiving incentives.
- Parents bring children to the camps
  - # of beneficiaries attending camps
  - # of beneficiaries receiving incentives

**GOAL**
- At the end of the Program, immunization rate was 39% in the intervention villages as compared to 6% in comparison villages
- Increased Immunization Rates
  - # of children immunized

**Situation/Context Analysis:** High health worker absenteeism, low value of immunization, limited income and time
Did we reach the goal?

Banerjee et al., 2010
Step 6: Make Assumptions Explicit

INPUT

- Immunization Camps
- Incentives for Immunization

OUTPUT

- Camps are reliably Open
- Incentives are delivered

OUTCOME

- Parents bring children to the camps
- Vaccinations are actually administered

GOAL

- Increased Immunization

Parents trust the camps
Parents bring children to the camps repeatedly
Parents value the incentives
Incentives are actually paid
WHY IS THEORY OF CHANGE IMPORTANT?
Why is Theory of Change Important?

For evaluators, reminds us to consider process

For implementers, it helps us be results oriented

INPUT

Immunization Camps

Incentives for Immunization

OUTPUT

Camps are reliably Open

Incentives are delivered

OUTCOME

Parents bring children to the camps

Parents bring children to the camps repeatedly

GOAL

Increased Immunization

GOAL

GOAL
Solving the Black Box Problem

Low immunization rates

Intervention

Black Box

No increase in full immunization

Needs Assessment

Intervention design/Inputs

Final outcome
Theory Failure vs. Implementation Failure

**Successful intervention**

- Inputs → Activities → Outputs → Outcomes → Goal

**Implementation failure**

- Inputs → Activities → Outputs → Outcomes → Goal

**Theory failure**

- Inputs → Activities → Outputs → Outcomes → Goal
CASE EXERCISE: DISTANCE LEARNING IN NORTHERN GHANA

Implementing Partner – The Varkey Foundation

Researchers: Jamie Johnston – Stanford University
Christopher Ksoll – Mathematica Policy Research
How can we deliver high-quality teaching to rural students?

• Students in rural areas significantly underperform (OECD 2013, GES 2012, World Bank 2012)

• In remote rural areas, shortage of trained primary teachers (World Bank 2012)

• Teaching quality matters for student learning (Glewwe et al. 2011, McEwan 2015)

• Structured pedagogy interventions appear to have largest, most consistent positive effects on learning (Ganimian & Murnane 2016, Snistveit et al 2015, Kremer et al., 2013)

• Little known about effectiveness of interactive distance instruction models
**MG Cubed Satellite Class Program**

**Varkey Foundation MG Cubed Program**

- 72 schools equipped with technology package
- Broadcasts live lessons daily to remote classrooms
  - 6 trained studio teachers broadcast to 12 classes at a time
  - 1 hour math and 1 hour English, 5 days a week
- In-person teachers trained as “facilitators”
- Targets most marginalized students within schools
  - Girls and boys in Grades 2-5
  - Identified as marginalized by schools according to criteria (distance to school, number of siblings, truancy, age)

*Photo Credit: Varkey Foundation*
Girls’ After School Program

• Provides after-school sessions to in-school girls and out-of-school girls in community (who have left school)
• 1 hour per day, 4 days a week
• Engage girls in topics including
  ▪ Early pregnancy
  ▪ Early marriage
  ▪ Girls’ rights
  ▪ Financial literacy
• Provides access to adult female role models
• Boys’ monthly after-school program started in response to demand for similar program
Step 1: What is the situation/context

Step 2: What are the program goals?
Step 3: Program design

- Varkey Foundation MGCubed Program
- 72 schools equipped with technology package
- Broadcasts live lessons daily to remote classrooms
  - 6 trained studio teachers broadcast to 12 classes at a time
  - 1 hour math and 1 hour English, 5 days a week
- In-person teachers trained as “facilitators”
- Targets most marginalized students within schools
  - Grades 2-5 girls and boys
  - Identified as marginalized by schools according to criteria (distance to school, number of siblings, truancy, age)
Step 4: Map the causal pathway

Step-by-step laying out the theory connecting your program to the goal

Series of if.../then... statements forming results chain:

Q: How do we close the education performance gap for rural, marginalized, Ghanaian girls.

A: If [inputs] produce [outputs] this should lead to [outcomes] which will ultimately contribute to [goal].
Step 4: Map the causal pathway

Step 5: Design SMART Indicators
Step 6: Make assumptions explicit
**INPUT**
- Increase instructional time-on-task
- Improve teaching pedagogy
- Improve curricular content

**OUTPUT**
- Reduce absenteeism
- Leverage studio teacher capacity
- More engaging

**OUTCOME**
- Increase classroom time-on-task
- Improving facilitator capacity
- More interactivity

**GOAL**
- Improved numeracy and literacy