CPP 524: Foundations of Program Evaluation II

Evaluation Design Project – Step #3
Building a Theory of Change

For this section of your final project you will articulate the process by which change occurs as a result of the program intervention using a **theory of change**. The theory of change is **a causal chain that links activities in your program to desirable outcomes**.

A compelling evaluation will combine a clear theory of change with evidence to support the claim that the intended outcomes are a result of program activities and not some other explanation.

It is important because:

- A quantitative impact study treats the program or policy as a black box. It requires no understanding of the mechanisms that make a program effective to detect changes that occur as a result of the program.

- This can create complacency in a desire to understand the programs, as well as lead to the production of information that provides evidence for impact or lack of impact but offers no clear framework for how programs can be improved.

- A clear theory of change can inform important features of the evaluation design, such out which outcomes should be measured, what time frame for the study (pre-treatment and post-treatment observations) are appropriate, and what sort of counterfactuals are possible.

Methodology

This step of the project asks you to open up the black box and spend time trying to capture the essence of the intervention is an abstract and stylized way. The theory of change allows you to communicate your understanding of the **_essential elements and processes_** of a program in a succinct manner.

There are many ways to articulate and represent a theory. This assignment asks you to create a diagram of your theory using boxes that represent states of the world and arrows that represent causal mechanisms that change the boxes. Or stated differently, boxes are nouns and arrows are verbs. The diagram will explain the core activities and outcomes that occur as a result of the program.

This approach is described by the Center for Theory of Change in the document titled, "How Does Theory of Change Work?" and the accompanying demonstration, "Project Superwoman: A Guided Example".

Scope

As you will see in the examples, the easiest way to build a theory of change is to start with the desired outcome and work backwards, constructing each step in a causal chain that needs to occur.

(1) Describe Your Program:

Spend **one to three paragraphs** describing the mechanics of your program. This is meant to familiarize the reader with your **program model**. A label like "tutoring program" is not sufficient because there are many different types of program models that could be used during a tutorial session. What are the essential details that might differentiate this program from other similar programs? You might consider details like:

- Who does it serve (describe the typical participant)?
- How do they get access to the program?
- What are the main program activities?
- How long does it last (each session and total program duration)?

The description should only be as long as it needs to be. You want to provide enough information so your reader has context for your evaluation design, but not too much that you are burying them with details. Focus on essential components and not logistics.

(2) Describe the Program Participation Criteria:

What are the conditions that program participants must meet before starting the program? **One to two paragraphs.**

These may be conditions that describe need (economic means-testing to qualify for assistance or parental status to qualify for scholarships), triggers (violation of parole might trigger participation on a program, or hospitalization for drug addiction could trigger commitment in a treatment program), or conditions that describe endowments (kids that have innate musical talent might qualify for a scholarship).

Is the program open to anyone that qualifies, do you have to apply, or does it select its own participants? For example targeted environmental remediation might select brown field based upon their strategic geographic value and recruit owners, versus owners applying directly to the program.

(3) Describe Your Target Population's Baseline Status:

What do the typical primary program targets look like before the "treatment"? In a theory of change it's important to describe the initial conditions before they are impacted by the program. **One paragraph.**

(4) Select Outcomes:

Describe the program outcome or outcomes that you intend to track and that you enumerated in the a previous step (**one paragraph**).

(5) Theory of Change:

Explain the theory of change for the program by tracing the causal chain between program activities and your indicators. Include a diagram, as well as a description of the model (3-5 paragraphs).

In your causal diagram be sure to use clear language to describe what happens at each step. Don't write ambiguous phrases like "self-esteem". Instead be specific like, "Students experience increase in self-esteem".

Make sure that each node in the diagram represent an action or change in the state of the world, and that each arrow represents a causal relationship (the current action or event causes the change in status or next action in the diagram).

These are **statistical causal claims** operating in social systems and not mechanical processes described in physics, so outcomes may vary by individual. **The arrow will describe the typical or average effect** that one can expect to observe. When the outcome is binary (graduates from high school or not, does not recidivate after being released from prison, etc.) then the arrow represents a change in the probability occurring.

Make sure you are not simply listing program activities, but being specific about how they create impact. For example, does a science camp for girls create more interest in STEM topics through interest in the subject matter? Or was interest always there, and it increases self-confidence in the subject area? Be specific about your understanding of the mechanisms that produce impact.

Also make sure you adequately describe the steps needed to achieve program success. It is not sufficient to say, for example, someone suffering from addition enters treatment, stops using drugs, and graduates. What internal changes would have to occur to overcome the addiction?

It helps to think about the differences between successful cases and unsuccessful ones. A music tutor can teach proper technique, but the student needs to practice the technique to create muscle memory for the intervention to be effective. A skilled tutor is necessary to achieve success, but not sufficient without investments made by the student. Time spent practicing should be an explicit node in the model. For the addiction model, the program participant needs to own the addiction and invest in behaviors to change.

Bad: Girls participate in leadership training → Girls develop leadership skills

What changed here? How would you observe leadership skills?

Good: Girls participate in leadership training → enhance self-worth, conflict resolution skills → exhibit stronger leadership traits in the classroom

A theory of change can be considered good if it could be used by someone unfamiliar with the program model to implement a similar model in their organization. Don't try to include too much – try to focus on the bare minimum of things that must happen for the program to achieve impact. It's easier to make a model overly-complicated than it is to make it precise.

(6) Key Assumptions:

Justify all of the key assumptions in your theory of chain through existing program models, research, or sound reasoning. How much evidence do we have that this program works? (**1-3 paragraphs**)

Note that each arrow in your diagram represents a causal statement (A changes B). Each arrow then is also an assumption about how the world works. It is important to look over your diagram and determine your level of certainty about each of these assertions. Are they self-evident or uncontentious claims (irrigating crops will lead to higher crop yield)? Or are they non-obvious or contentious (higher self-esteem leads to faster salary gains, coffee prevents cancer, people born in January make better CEOs)?

Ideally, your theory of change model will be succinct, provide enough detail to understand the program, and is easy to understand. It is a good practice to ask a classmate or friend look over your theory of change to see if it is clear. In practice, the TOC is revised many times before it reaches a balance of enough detail but not too much, and a clear articulation of all essential mechanisms that lead to the impact captured by the evaluation.

If it creates confusion, ask yourself whether:

- There are claims that requires a logical leap by the reader (how does self-esteem lead to higher salary?), then you might be missing a step in your model (higher self-esteem makes a person more likely to take on a leadership role, which leads to salary increases).

- There are claims that are not self-evident or counterintuitive. In these instanced, back up the claim with some evidence from research or examples from other programs.

Deliverables:

Submit your write-up of your theory of change. Include headers the six items above and a full-page diagram of your theory of change (it can be hand-drawn or created in a graphics program like Power Point). Make sure it can be easily printed (no dark nodes and dark fonts, text is large enough to read when printed).

Citations

If you draw on research for your assumptions provide footnotes with proper citations (Chicago or APA style of published work, reference websites or reports through URLs).