Understand Causes of Outcomes and Impacts
- Jane Davidson
As a profession, we often either oversimplify causation or we overcomplicate it!
senior leadership & management development program
too soon?
leadership development program

immediate/soon after learning

enhanced knowledge & skills

weeks to months later

improved performance as a leader

months to years later

appointable candidate for senior roles

check timing of outcomes v. 1
check timing of outcomes v. 2

- entry into leadership development program
- visibility as emerging leader
- being asked to apply for senior roles
- appointable candidate for senior roles

Steps:
- On enrolment (or soon after)
- Weeks to months later
- Months later

- identification of needed experience
- gaining experience in senior roles
leadership development program

identification of needed experience

gaining experience in other roles

appointable candidate for senior roles

match content ...

... to outcomes
ask participants

changed job?
career advancement?
did the program help?
More than half said the program helped them get a promotion

- Changed roles, definite program impact: 40%
- Changed roles, partial program impact: 13%
- No change, but enhanced aspirations: 13%
- Changed roles, but no program impact: 13%
- Changed roles, negative impact: 2%
- No change in roles or aspirations: 19%
“firstly, actually being accepted for the course is rated highly,

secondly I understand that my interview went well because of my ability to relate program learnings to real life issues.”
3 messages
3 messages

1. all outcome/impact evaluation needs causal inference
3 messages

1. all outcome/impact evaluation needs causal inference

2. going qualitative doesn’t let you off the causal hook!
3 messages

1. All outcome/impact evaluation needs causal inference

2. Going qualitative doesn’t let you off the causal hook!

3. The real "gold standard" is sound causal reasoning!
Most evaluations need to investigate what is causing the outcomes and impacts of an intervention. (Some process evaluations assume that certain activities are contributing to intended outcomes without investigating these).

Sometimes it is useful to think about this in terms of ‘causal attribution’ – did the intervention cause the outcomes and impacts that have been observed? In many cases, however, the outcomes and impacts have been caused by a combination of programs, or by a program in combination with other factors.

In such cases it can be more useful to think about ‘causal contribution’ – did the intervention contribute to the outcomes and impacts that have been observed?

**Tasks**

1. **Check the results support causal attribution**
   One strategy for causal inference is to check that the data are consistent with what we would expect if the intervention were being effective? This involves not only whether or not results occurred, but their timing and specificity.

2. **Compare the results to the counterfactual**
   Another strategy is to assess the impact of an intervention is to compare it to an estimate of what would have happened without the intervention. Options include the use of control groups, comparison groups and expert predictions.

3. **Investigate possible alternative explanations**
   A third strategy is to identify other factors that might have caused the impacts and see if it is possible to rule them out.
One of the tasks involved in understanding causes is to check whether the observed results are consistent with a cause-effect relationship between the intervention and the observed impacts.

Some of the options for this task involve an analysis of existing data and some involve additional data collection. It is often appropriate to use several options in a single evaluation. Most impact evaluations should include some options that address this task.

**Options**

Gathering additional data

- **Asking Key Informants to Attribute Causality**: providing evidence that links participation plausibly with observed changes.
- **Modus operandi**: drawing on the previous experience of participants and stakeholders to determine what constellation or pattern of effects is typical for an initiative.
- **Process tracing**: focusing on the use of clues (causal-process observations, CPOs) to adjudicate between alternative possible explanations.

**Analysis**

- **Check dose-response patterns**: examining the link between dose and response as part of determining whether the program caused the outcome.
- **Check intermediate outcomes**: checking whether all cases that achieved the final impacts achieved the intermediate outcomes.
- **Check results match a statistical model**: comparing results with a statistical model to determine if the program caused the outcome.
- **Check results match expert predictions**: making predictions based on program theory or an emerging theory of wider contributors to outcomes and then following up these predictions over time.
- **Check timing of outcomes**: checking predicated timing of events with the dates of actual changes and outcomes.
- **Comparative case studies**: using a comparative case study to check variation in program implementation.
- **Qualitative comparative analysis**: comparing the configurations of different cases to identify the components that produce specific outcomes.
- **Realist analysis of testable hypotheses**: using a realist program theory (what works for whom in what circumstances through what causal mechanisms?) to identify specific contexts where results would and would not be expected and checking these.

**Approaches**

Some approaches combine these different elements of explanation:

- **Contribution Analysis**: assessing whether the program is based on a plausible theory of change, whether it was implemented as intended, whether the anticipated chain of results occurred and the extent to which other factors influenced the program's achievements.
- **Collaborative Outcomes Reporting**: mapping existing data against the theory of change, and then using a combination of expert review and community consultation to check for the credibility of the evidence.
- **Multiple Lines and Levels of Evidence (MLLE)**: reviewing a wide range of evidence from different sources to identify consistency with the theory of change and to explain any exceptions.
Check the results support causal attribution

- modus operandi
- timing of outcomes
- intermediate outcomes
- match content to outcomes
- ask key informants
Check the results support causal attribution

- modus operandi
- timing of outcomes
- intermediate outcomes
- match content to outcomes
- ask key informants
- process tracing
- comparative case studies

we used

- dose-response patterns
- fit with a statistical model
- fit with expert predictions
- statistical control of extraneous variables
- realist analysis
- qualitative comparative analysis
2

Compare the results to the counterfactual

we used

ask key informants

expert-estimated counterfactual
2

Compare the results to the counterfactual we used:

- ask key informants
- expert-estimated counterfactual
- statistically created counterfactual
- logically constructed counterfactual
- regression discontinuity
- sequential allocation
- control group
- matched comparisons
- judgemental matching
- instrumental variables
- difference in difference (or double difference)
- qualitative comparative analysis
3

Investigate possible alternative explanations

- general elimination
- methodology & modus operandi
- searching for disconfirming evidence
- asking key informants

we used
Investigate possible alternative explanations

- general elimination methodology & modus operandi
- searching for disconfirming evidence
- asking key informants

We used:
- force field analysis
- process tracing
- RAPID outcomes assessment
- ruling out technical explanations
- statistically controlling for extraneous variables
Most evaluations need to investigate what is causing the outcomes and impacts of an intervention. (Some process evaluations assume that certain activities are contributing to intended outcomes without investigating these).

Sometimes it is useful to think about this in terms of “causal attribution” — did the intervention cause the outcomes and impacts that have been observed? In many cases, however, the outcomes and impacts have been caused by a combination of programs, or by a program in combination with other factors.

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**Tasks**

1. Check the results support causal attribution.
2. Compare results to the counterfactual.
3. Investigate possible alternative explanations.
4. Synthesize.
Further resources

http://betterevaluation.org/plan/understandcauses

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