Evaluative Thinking:
Principles and Practices for Learning in and about Evaluation

Professional Development Workshop #20, American Evaluation Association
November 8, 2017
8:00 AM – 3:00 PM

Time	Activity
8:00	Welcome, Introductions, and Overview
8:30	World Café on thinking and learning in/and monitoring and evaluation
9:15	Thoughts on evaluative thinking (ET)
9:30	*Break*
9:45	Identifying assumptions • Definitions—types of assumptions (10 minutes) • ACTIVITY: Assumption brainstorming (15 minutes) • ACTIVITY: Scenario analysis (30 minutes) • Reflection and discussion (20 minutes)
11:15	Pursuing deeper understanding through reflection and perspective taking • ACTIVITY: Six thinking hats—"Instilling ET in Quarterly Meetings" (30 minutes) • ACTIVITY: Conversational roles (demo)
12:00	*Lunch break*
1:00	Energizer: Brainstorming plausible alternative explanations
1:15	Diagramming thinking and posing thoughtful questions • Introduction to boundary analysis and pathway modeling (15 minutes) • ACTIVITY: Boundary analysis and pathway modelling (30 minutes) • ACTIVITY: Peer review of pathway models (30 minutes) • Reflection and discussion; "appreciative Pause" (15 minutes)
2:30	Informing decisions in preparation for action • Strategies and activities to promote ET • Group discussion: Overcoming real world barriers to ET
2:55	Workshop evaluation
3:00	Adjourn

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Evaluative Thinking Defined

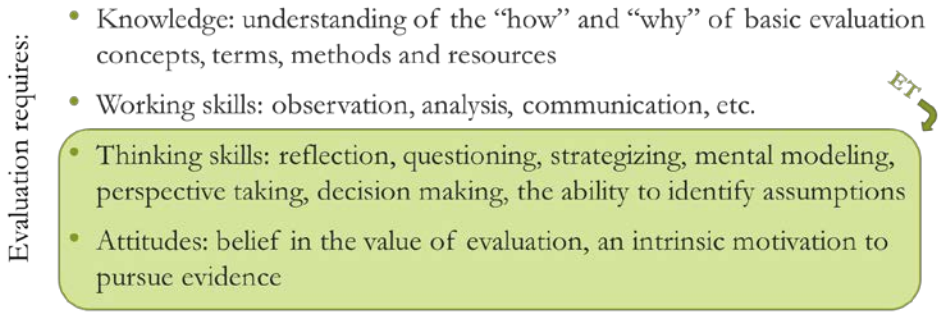
Evaluative thinking is a relatively new idea in the field of Evaluation. So far, here are some ways people are defining it.

> *Evaluative thinking is* ***critical thinking applied in the context of evaluation****, motivated by an* ***attitude of inquisitiveness*** *and a* ***belief in the value of evidence****, that involves:* ***identifying assumptions, posing thoughtful questions, pursuing deeper understanding through reflection and perspective taking, and making informed decisions in preparation for action****.*
>
> Buckley, Archibald, Hargraves, & Trochim (2015)

Note: In this definition, we define evaluation very broadly, encompassing all MEAL activities and even other reflective professional practice.

> Evaluation is an activity. **Evaluative thinking is a way of doing business**. This distinction is critical. It derives from studies of evaluation use. Evaluation [or MEAL] is more useful—and actually used—when the program and organizational culture manifests evaluative thinking.
>
> -Michael Quinn Patton
>
> Preface to 2014 InterAction Report, Embracing Evaluative Thinking for Better Outcomes

Evaluative thinking represents a large portion of the capacity necessary to do good evaluation:



You know you evaluative thinking is happening when you hear things like:

- *"Why are we assuming X?"*
- *"How do we know X?"*
- *"What evidence do we have for X?"*
- *"What is the thinking behind the way we do X?"*
- *"How could we do X better?"*
- *"How does X connect to our intended outcomes?"*
- *"Stakeholder X's perspective on this might be Y!"*

You know evaluative thinking is happening when you see things like:

- More evidence gathering (formal and informal)
- More feedback (all directions)
- Reflective conversations among staff, beneficiaries, leadership, etc.
- More model making/illustrating thinking
- More motivation to do formal evaluation work
- Program evolution/adaptation
- More effective staff and programs

Do you have additional ways of defining evaluative thinking?

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Guiding Principles for Promoting Evaluative

I. ***Promoters of evaluative thinking should be opportunist about engaging learners in evaluative thinking processes in a way that builds on and maximizes intrinsic motivation*** (Bransford, Brown, & Cocking, 1999; Brookfield, 2012; Piaget, 1978; Vygotsky, 1978). For instance, if staff members in an organization dislike evaluation, yet demonstrate intrinsic motivation to critically reflect on their program's successes and failures as they drive back to the office from a program site together, ET promotion should focus on those naturally occurring discussions as a key starting point.

II. ***Promoting evaluative thinking should incorporate incremental experiences, following the developmental process of "scaffolding"*** (Bransford, Brown, & Cocking, 1999; Brookfield, 2012). Extending Perkins' analogy, cited above, a good walker should be coached through progressively more challenging walks and hikes rather than launched immediately into extreme long-distance hikes in difficult terrain. Incremental skill-building is especially important because ET can involve a potentially risky (emotionally or politically) questioning of foundational assumptions. To put this principle into practice, efforts to promote ET should begin by focusing on generic or everyday examples before questioning the philosophical assumptions that may be fundamental to an organization's theory of change.

III. ***Evaluative thinking is not a born-in skill, nor does it depend on any particular educational background; therefore, promoters should offer opportunities for it to be intentionally practiced by all who wish to develop as evaluative thinkers*** (Brookfield, 2012; Ericsson & Charness, 1994). If an organization's leader asserts that ET is important, yet does not provide opportunities for staff to learn about and practice it, little or nothing will change. What's more, efforts to promote ET should not be limited to staff with evaluation responsibilities; ideally, all members of an organization should have the opportunity to think evaluatively about their work.

IV. ***Evaluative thinkers must be aware of—and work to overcome—assumptions and belief preservation*** (Brookfield, 2012; Lord et al., 1979; Nkwake, 2013). Promoters should offer a variety of structured and informal learning opportunities to help people identify and question assumptions.

V. ***In order to best learn to think evaluatively, the skill should be applied and practiced in multiple contexts and alongside peers and colleagues*** (Bransford et al., 1999; Brookfield, 2012; Foley, 1999; Halpern, 1998; Simon, 2000). ET can and should be practiced individually, yet applying this principle can leverage the benefits of social learning (discussed in greater detail below) and help people move away from the notion that evaluative thinking is done only by the evaluator and only during formal evaluations.

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Scenario Analysis

A community science education initiative based at a local university and funded by the National Science Foundation has designed a program that will take place one Friday afternoon next month at the public library.

Families with children 12 and under will be invited to participate in a one-time, two-hour event focused on the geology of volcanos. To publicize the event, the program implementers posted fliers on the library bulletin board and broadcast the event via social media.

Families will work together to build the volcanos, make them "erupt," track the flow of lava, and then build a new layer of "rock" (clay) onto their volcanos, demonstrating how volcanos form over time.

The program implementers are focused on demonstrating the impact of their program to the funder, and some of them are also interested in eventually publishing on this program in a peer-reviewed journal. In particular, they would like to claim that they have had a positive effect on participating youth's attitudes towards and interest in science. To that end, program staff have chosen an existing, validated survey of students' attitudes toward science to be given via iPads both before (pre) and after (post) the event at the library. The program also hopes to reach underrepresented groups of kids, which is important to the funder.

Now, please do the following exercises, thinking of the program implementers:

1. *What assumptions—explicit and implicit—do you think they are operating under? List as many as you can.*
2. *Of the assumptions you've listed, which ones could the character check by simple inquiry? How could she or he do this?*
3. *Give and alternative interpretation of this scenario—a version of what's happening that is consistent with the events described but that you think the program implementers would disagree with or have not noticed*.

To structure your answers to these questions, you can make a table like this one:

#	Assumption	How to Check	Alternative Interpretations

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Thinking Hats

THINKING HATS

Based on very popular work in organizational management by Edward de Bono, 'thinking hats' helps people take on different perspectives to see an issue in different ways.
Six distinct directions of thought are identified and assigned a color. The six directions are:

- **Managing** (Blue) - What is the subject? What are we thinking about? What is the goal?
- **Information** (White) - Considering purely what information is available, what are the facts?
- **Emotions** (Red) - Intuitive or instinctive gut reactions or statements of emotional feeling (but not any justification).
- **Discernment** (Black) - Logic applied to identifying reasons to be cautious and conservative.
- **Optimistic response** (Yellow) - Logic applied to identifying benefits, seeking harmony.
- **Creativity** (Green) - Statements of provocation and investigation, seeing where a thought goes.

Scenario

WASH is a public health program designed to increase hygienic practices, including handwashing and use of latrines, in rural Zambia. The program has been implemented for the past five years in approximately the same way. Field-based staff host meetings with local community members in which they describe the importance of handwashing and use of latrines, demonstrate proper handwashing technique and connect local leaders to partner programs working to develop water infrastructure.

Over the past five years, WASH's evaluation work shows that both handwashing and use of latrines has increased. However, more than half of the community members targeted by the program are still not using these hygienic practices.

With little information about why people are not adopting these practices, WASH leadership in Zambia have determined that the best way to increase handwashing and use of latrines is to provide additional, more frequent trainings for community members. The idea being that people simply aren't understanding how important these practices are. Program leaders have secured funding to double the number of meetings in each community they serve.

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Pathway Models

1. Model Components

- ***Activities*** are things done by program staff that reach participants or targeted audiences.
- ***Short-term (ST) outcomes*** are learning connected to Activities, resulting in changed awareness, knowledge, attitudes, skills, opinions, aspirations, and motivations; these are the first set of outcomes that might be observed.
- ***Mid-term (MT) outcomes*** are effects connected to Activities or Short-term outcomes, including changes in behavior, practice, action or decision making, policies or social action; these are a bridge between short term and long term outcomes.
- ***Long-term (LT) outcomes*** may be ultimate impacts, connected to Short- or Medium-term outcomes, on social, economic, civic, or environmental conditions; these are the last set of outcomes that might be observed.

2. Notes on Model Building

There may be …

- More than one arrow coming FROM an Activity or Outcome
- More than one arrow going IN TO an Outcome
- Arrows AMONG Outcomes in a column (ST leading to other ST, MT to other MT, etc.)
- Arrows in both directions between two Outcomes

There should NOT be …

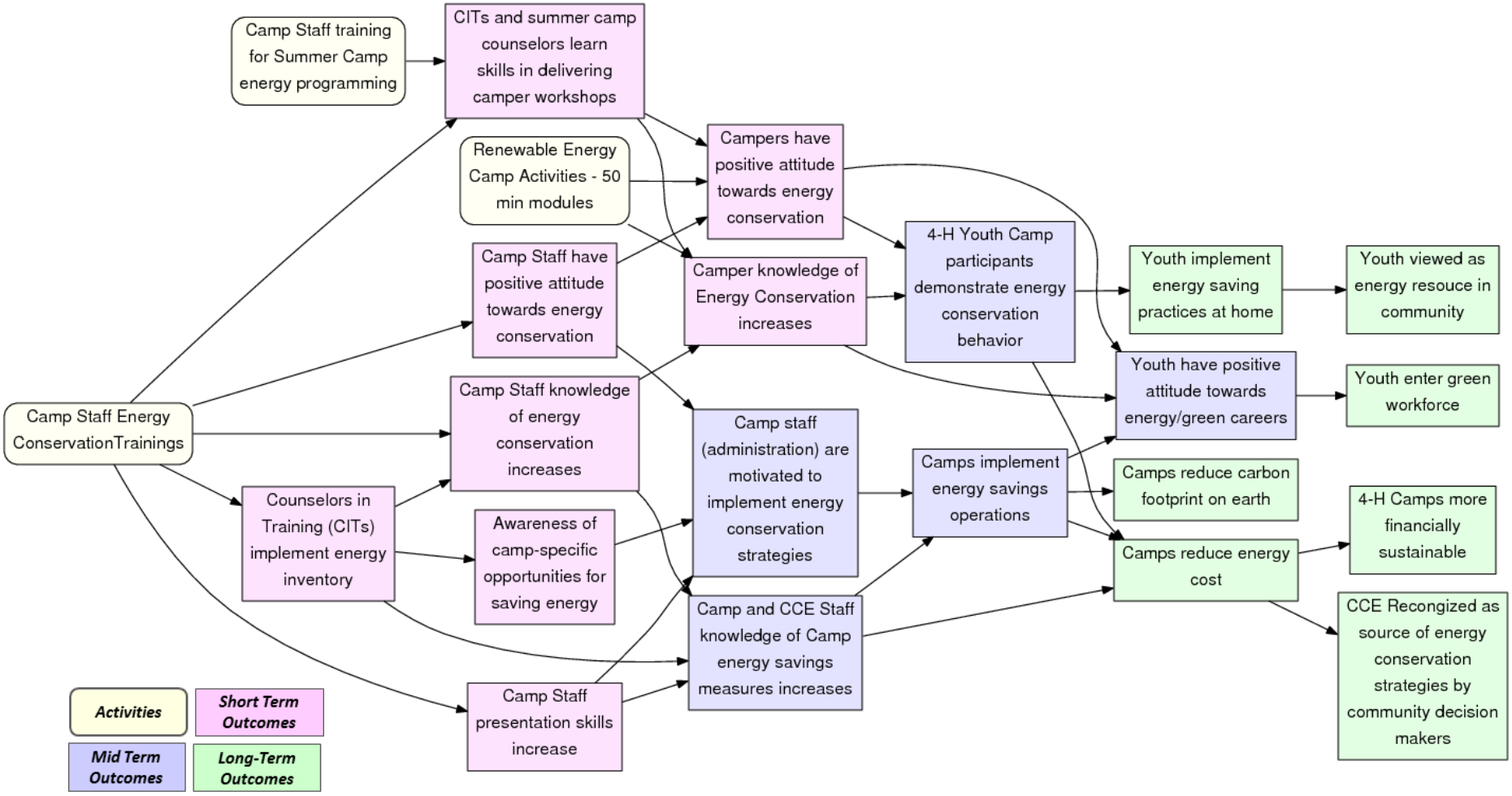
- An Outcome with no arrow leading to it
- An Activity with no arrows leading from it

Ideal level of detail? – It depends!

Look at the completed pathway model and ask:

- Are there any activities that are not connected to any outcomes?
- Are there any outcomes that are not connected to any activities?
- If yes, why do these gaps exist?
- Was something simply left out of the model?
- Or, is there a program activity that does not really address the program goals?
- Is the program expected to lead to a particular outcome, but does not actually include an activity that would result in that outcome?

Example of a Pathway Model: *Draft of Cornell Cooperative Extension (CCE) Energy Smart Camps & Campers Program*



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Pathway Model Review

Purpose: The purpose of this activity is to help you think evaluatively using a pathway model diagram.
Process: First, in step (1), work with your group to review the provided model and leave comments and questions using sticky-notes. You can leave notes that are (a) what you like, (b) questions you have, and (c) suggestions you have. Then, in step (2) you will identify assumptions in and "around" the model.
Time: ~ 30 minutes

1. CRITICAL REVIEW

Use sticky-notes (any color) to write:

a. "I like this because …"
b. "My question is …"
c. "My suggestion is …"

Consider:

1. Look for good ideas and write what you like about it. (These might be particularly good or novel outcomes, good links, whatever deserves recognition.)
2. If you see big leaps of logic, mark them with a question note (A big leap is where there's an arrow from an Activity all the way to a Mid-Term Outcome, or a Short-Term Outcome all the way to a Long-Term Outcome, etc. It could also be a one-step arrow if there's a big leap of logic involved, so that it seems like something is being skipped over.)

2. ASSUMPTIONS APPRAISAL

With your group, brainstorm the assumptions (any type) that underlie the theory of change represented by this model.

1. List the assumptions
2. Label them by type (A -> ST, ST -> MT, MT -> LT, prescriptive, paradigmatic)
3. Sort the assumptions you've brainstormed into three categories:
    - Willing to accept this assumption without additional evidence
    - Evidence may need to be collected here, but it is not a top priority
    - Collecting evidence to address this assumption should be a top priority

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Appreciative Pause

PURPOSE OF THE EXERCISE

Evaluative thinking can be intimidating, hard, and exhausting. It is also a social learning process. In light of both of these aspects of the work, this activity provides opportunities for peers to deliberately show how peer feedback contributed to their learning, helped them identify and check assumptions, and generate multiple perspectives.

HOW IT WORKS

In or after every discussion, pause briefly, so participants can give appreciation for:

- A question that was asked that suggested a whole new way of thinking.
- A comment that clarified something that until then was confusing.
- A comment that opened up a whole new line of thinking.
- A comment that helped identify an assumption.
- A comment that provided helpful evidence.
- A comment that identified a gap in reasoning that needed to be addressed.
- A new idea that is intriguing and had not been considered before.
- A comment showing the connection between two other ideas or contributions when that connection hadn't been clear.
- An example that was provided that helped increase understanding of a difficult concept.

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ET Strategies and Activities

Strategies	Examples of Activities
1. Create an intentional ET learning environment	a) Display logic models in the workplace—in meeting rooms, within newsletters, etc. b) Create public spaces to record and display questions and assumptions. c) Post inspirational questions, such as, "How do we know what we think we know?" (Patton, 2005). d) Highlight the learning that comes from successful programs and evaluations and also from "failures" or dead ends.
2. Establish a habit of scheduling meeting time focused on ET	a) Have participants "mine" their logic model for information about assumptions and how to focus evaluation work (for example, by categorizing outcomes according to stakeholder priorities) (Trochim et al., 2012; Urban & Trochim, 2009). b) Use "opening questions" to start an ET discussion, such as, "How can we check our assumptions for accuracy?" (Brookfield, 2012); "What plausible alternative explanations are there for this finding?" (Shadish, Cook, & Campbell, 2002). c) Engage in critical debate on a neutral topic. d) Conduct a media critique (critically review and identify assumptions in a published article, advertisement, etc.) (Taylor-Powell, 2010).
3. Use role-play when planning evaluation work	a) Conduct a scenario analysis (have individuals or groups analyze and identify assumptions embedded in a written description of a fictional scenario) (Brookfield, 2012). b) Take on various stakeholder perspectives using the "thinking hats" method, asking participants to role play as a particular stakeholder (DeBono, 1999). c) Conduct an evaluation simulation (simulate data collection and analysis for your intended evaluation strategy).
4. Diagram or illustrate thinking with colleagues	a) Have teams or groups create logic and pathway models (theory of change diagrams or causal loop diagrams) together (Trochim et al., 2012). b) Diagram the program's history. c) Create a system, context and/or organization diagram.
5. Engage in supportive, critical peer review	a) Review peer logic models (help identify leaps in logic, assumptions, strengths in their theory of change, etc.). b) Use the Critical Conversation Protocol (a structured approach to critically reviewing a peer's work through discussion) (Brookfield, 2012). c) Take an appreciative pause (stop to point out the positive contributions, and have individuals thank each other for specific ideas, perspectives or helpful support) (Brookfield, 2012).
6. Engage in M&E	a) Ensure that all evaluation work is participatory and that members of the organization at all levels are offered the opportunity to contribute their perspectives. b) Encourage members of the organization to engage in informal, self-guided evaluation work. c) Access tools and resources necessary to support all formal and informal evaluation efforts (including the support of external evaluators, ECB professionals, data analyzers, etc.).

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Evaluative Thinking Learning-to-Action Plan Template

PURPOSE OF THE EXERCISE To help you apply the lessons and skills learned here to your work.

With most professional development workshops, it is often difficult to actually go back to your day-to-day work and actually put something learned or gained from the workshop into practice. Perhaps with evaluative thinking, it could be even harder (that is an assumption ☺). So the purpose of this plan is for you and your colleagues to come up with a concrete plan to use ET in the next three months and over the upcoming year. ***Your Name:*** _____

Your Position: _____

Please fill in the blanks below (*use additional paper as needed*):

What do you ***know*** now that you didn't know yesterday?

What can you ***do*** now that you couldn't do yesterday?

What could you ***teach*** someone to know or do that you couldn't teach them this time yesterday?

Which ***specific activities*** that we practiced today could you use in your work? *Describe how the activity will look in reality (imagine you are looking through a window at yourself doing the activity.)*

Which other practices from ***the list of practical strategies*** (see handout/slide) could you use?

What ***existing activities*** do you do that you now see you can increase the intentionality of ET in?

Specifically, what steps (if any) will you take ***in the next three months*** to use ET more in your work?

References

References cited in these handouts as well as in the accompanying PowerPoint presentation are presented below:

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