How the Logic Model Concept can help you in your projects and career

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A problem well stated is a problem half solved.

Charles Kettering
What is a logic model?

A theory of change visually linking the connections between the problem, solution, activities, outputs, outcomes, and the intended impact desired by a given program.

In other words…

A link of causes and effects leading to measurable outcomes of interest.
**Problem Space:** what is the problem you are trying to address?

**Solution Space:** what is your hypothesis/strategy?

**Inputs:** what resources are needed to run your program?

**Activities:** what actions does the program take to achieve desired outcomes?

**Outputs:** what measurable products will be produced from your program's activities? Be specific.

**Outcomes:** what are the main intended effects/benefits of the program/tool/database etc?

**Major Assumptions:** what does the approach assume?
Another way to see the logic model is a series of “If-Then” Statements

- **Input**: Certain resources are needed to run your program
- **Activities**: IF you have access to them, THEN you can accomplish your activities
- **Outputs**: IF you can accomplish these activities, THEN you will have delivered the services you planned
- **Outcomes**: IF you have delivered the services as planned, THEN there will be benefits for clients, communities, systems or organizations
The Fellows Program at SAi practices the use of the logic model.

The program provides mentorship and funding to early stage project ideas that aim to make science more accessible, diverse, and inclusive around the world.

SAi Fellows C5 Pitch Day
SAT MAY 15, 2021: 12PM ET

STEM ADVOCACY INSTITUTE
Could the project/program logic model be used at the individual level?
Why not?

We are calling this the professional logic model (PLM)
What is the professional logic model (PLM)?

A theory of change visually linking the connections between the problem, solution, activities, outputs, outcomes, and the intended impact desired by a given individual.
However:

Most programs (and professionals) don’t have a logic model written down. *(Or it loosely exists in their heads)*
So, you don’t have a logic model?

Well, build one!

And keep iterating.
What is the most important part of the logic model?

A – Problem framing
B – Solution design
C – Figuring out the inputs
D – Finding the resources
E – All the above
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My Search for the Problem

Me

Academia

Non Profit

Me

Grad School

Post Grad

College

Grad School

2015 Global Young Scientist Summit in Singapore

nature biotechnology

Build neuroscience capacity in Africa

The non-profit organization TnND is funding a neuroscience training initiative so that Africa's scientists can join this rapidly evolving research field (see www.trendafrica.org). TnND (for "Teaching and Research in Neuroscience for Development") is run by

Real World

Industry

Stanford SPLASH

Real World

MIT
Problem Space: how to build a top tier fundable, sustainable, and impactful global organization at the intersection of science and society.

Solution Space: seek learning opportunities; reframe jobs as learning projects/opportunities

**Inputs**
- funding
- Supportive partner
- Network
- Time
- Access to Platforms
- Mentors

**Activities**
- Informal interviews
- Linkedin engagement
- Courses/workshops
- Conference attendance
- Connecting others
- Talks
- Publications
- Mentoring others
- Teaching
- Grants written

**Outputs**
- # of informal interviews completed
- # of jobs applied
- # of connections developed and nurtured
- # of successful grants

**Outcomes**
- Confidence in skillset to lead and execute
- Working fulltime on SAi

**Major Assumptions:** job alignment, time, growth mindset
By Day

By Night + Weekends
Spend time in the problem-solution space

Framing

Problem Solution Space

What, When, Where, Who

Problem Space

Solution Space
There are many challenges in STEM.
But, building solutions to these issues is also really hard.
There are a ton of challenges.
Nonetheless, the number of people that want to tackle the challenges continues to grow.
SAi is a dedicated one-stop shop to incubate and launch their ideas.
Provides:

Infrastructure

Funding

Training

Mentorship
So that we can enable and accelerate the building of new tools and programs that expand pathways of access between STEM and society.
SAi Fellows Logic Model v2.0

**Problem:** lack of funding/mentorship and training for graduate trainees, postdocs, and scicommers to build impactful science engagement tools, programs and events.

**Mission:** Assist graduate trainees (PhD students and postdocs) and scicommers in developing innovative ideas in science outreach and engagement that address issues of access in science particularly in underrepresented populations and underserved areas around the world.

**Input**
- Graduate trainees
- Scicommers
- Mentors
- Fellow Funding
- Virtual Space
- Supplies
- Program Partners
- Technology
- Reviewers

**Activities**
- 1:1 Mentoring
- Logic model development
- Professional and project development
- Lectures
- Office hours

**Outputs**
- # of members of public that have been exposed to additional STEM programming developed the fellows
- # of fellows applying and participating
- diversity of fellows participating
- # of projects developed
- # fellows that receive additional funding/awards for their projects
- # of fellows invited to join SAi fellows
- Fellow feedback

**Outcomes**
- Increase the number of self sustaining impactful tools and programming that increase access to science (I)
- Increase the number of PhD programs and postdocs that provide funding/training to trainees to develop citizen science and science outreach projects (L)
- Expand the pool of scicommers trained in project development, management and assessment (S)

**Assumptions:** trainees have the time to do projects and are able to secure additional future funding
The demand for our incubator is accelerating.
We now have over 25 SAi residents & staff with diverse expertise.
Residents work on diverse projects with diverse impacts
Our revenue comes from 3 main sources:

- Grants
- Donations
- Contracts + Sales
We are thankful for the growing number of organizations that continue to fund us:

- Burroughs Wellcome Fund
- Google
- Xena Workwear for Women
- Thermo Fisher Scientific
- Story Collider
- Addgene
- Slack
- Ascb
Our diverse senior leadership team has been instrumental in our development.

Fanuel Muindi, PhD
Founder, Chief Resident & Trustee

Jessica W. Tsai, MD., PhD
Director of Research & Trustee

Nathan Vanderford, PhD
Trustee

Prasha Sarwate, MechE
Trustee

Joseph B. Keller, PhD
Trustee

Gurlovleen Rathore, PhD
Evaluation Officer

Noelle Romelfanger
Administrator

Anne Meier
Finance Officer
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Get in Touch!

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