Engaging respectfully and effectively in international development research collaborations

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MIT Local Innovation Group

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The MIT Local Innovation Group

MIT D-Lab designing for a more equitable world

Photo credit: MIT D-Lab

SOCIOTECHNICAL SYSTEMS RESEARCH CENTER

Photo credit: MIT Local Innovation Group and GED
The launch of Lean Research, August 2014
2014-2022: Field research in 14 countries

- United States
- Mexico
- Guatemala
- Ecuador
- Colombia
- Peru
- Ghana
- Uganda
- Tanzania
- Zambia
- India
- Sri Lanka
- Vietnam
- Philippines
#1. A consciously-chosen engagement paradigm

Engagement paradigms in international development research collaboration include:

1. Research by us, for us
2. Research for development (from outside the system)
3. Research as development (from inside the system)
4. Research capacity building, TA, and backstopping
#1. A consciously-chosen engagement paradigm

Table 1
Comparison of the traditional approach to agricultural research for development with a recent complexity-aware one.
(Adapted from Klerkx et al. (2012) and Douthwaite (2016).)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Linear approach to AR4D</th>
<th>Complexity-aware approach to AR4D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>“Transfer of technology” or “pipeline”</td>
<td>“Agricultural innovation systems”</td>
</tr>
<tr>
<td>Era</td>
<td>Central since 1960s to present</td>
<td>From 2000s to present</td>
</tr>
<tr>
<td>Mental model and activities</td>
<td>Supply technology to next user</td>
<td>Co-develop innovation involving multi-actor processes and partnerships</td>
</tr>
<tr>
<td>Knowledge and disciplines</td>
<td>Single discipline driven (mainly plant breeding)</td>
<td>Transdisciplinary, holistic systems perspective</td>
</tr>
<tr>
<td>Drivers</td>
<td>Supply-push from research</td>
<td>Responsiveness to changing contexts, patterns of interaction</td>
</tr>
<tr>
<td>Source of innovation</td>
<td>Scientists</td>
<td>Multiple actors, innovation platforms</td>
</tr>
<tr>
<td>Role of farmers</td>
<td>Adopters or laggards</td>
<td>Partners, entrepreneurs, innovators exerting demands</td>
</tr>
<tr>
<td>Role of scientists</td>
<td>Innovators</td>
<td>Partners, one of many responding to demands</td>
</tr>
<tr>
<td>Key changes sought</td>
<td>Benefits accruing from technology adoption</td>
<td>Institutional change, increase in system capacity to innovate</td>
</tr>
<tr>
<td>Dynamic</td>
<td>Research begins quickly according to a pre-defined agenda</td>
<td>Intervention begins by building relationships and trust through an open research agenda</td>
</tr>
</tbody>
</table>
#2. A theory of change

## ACTIONS

If I add compost to my backyard garden to improve the soil quality and plants seeds at the right time

## ASSUMPTIONS

and my garden has sufficient sunlight and water, and the fencing keeps the rabbits out

## ANTICIPATED RESULT

then I expect my flowers to grow stronger and taller than they did last year
#2. A theory of change

Example Theory of Change – Community Cooking

A group of older people (OPs) from the same local area attend twelve weekly Community Cooking sessions, each of which entails four separate elements:

- **Learn**: Trained cooks teach the OPs a new healthy food recipe each week.
- **Cook**: The OPs then cook the healthy food recipe together as a group.
- **Give**: Some of the food that the OPs cook gets sent to a local homeless shelter.
- **Share**: The OPs then sit down together to eat the rest of the food that they have cooked.

**Activities**

- **OPs adopt a healthier diet.**
- **OPs feel an increased sense of achievement.**
- **OPs have improved physical health.**
- **OPs have an improved sense of well-being.**

**Assumptions**

- **OPs have sufficient motivation to become healthier.**
- **OPs find the healthy food recipes sufficiently appealing.**
- **OPs learn or enhance their cooking skills.**
- **OPs see a sufficiently significant increase in their cooking skills.**
- **OPs see the homeless shelter as the most worthy cause to have their food sent to.**
- **OPs feel that they have contributed more to a worthy cause.**
- **OPs feel less lonely and socially isolated.**
- **OPs make new friends that they also see outside of the Community Cooking sessions.**

**Intermediate Outcomes**

**Ultimate Goals**
#2. A theory of change

#3. Participatory after-action reviews (AARs)
#4. Lean Research questions and a “lean log”

Guiding Questions for Conducting Lean Research

Lean Research does not provide a set of rules to follow, but rather a guiding orientation to encourage innovation and continual improvement in research practice. From the way in which research questions are selected through implementation and dissemination of findings, there are opportunities to better align the research process with principles of rigor, respect, relevance and right-size. While different types of research will call for different implementation strategies, the following questions can be used to help guide an iterative process of incorporating the Lean Research principles into planned and current research activities.

Is our research rigorous?

1. How do we know that our research adheres to the highest standards of our discipline or field of practice with regard to research and instrument design, data collection, cleaning, and analysis? Who or what resources have we consulted to obtain input on our research design?
2. What steps are we taking to ensure the internal validity of the research?
3. If applicable, what steps are we taking to ensure the external validity of the research?
4. How are we designing and implementing our research process to ensure that the research is reproducible?
5. What steps will we take to clearly, accurately, and transparently report all relevant research results to stakeholders?
6. How are we protecting the data of the people who participate in the research?
7. If the research is an impact evaluation or trial, is it registered with AEA’s social science registry? If the research is a Random Control Trial, is it registered in JBI’s RCTNE?
8. Will the research be reproduced or verified by an independent party? If there are no current plans for this, is the research conducted in a way that it can be easily verified?

Is our research respectful?

1. What are we doing to engage the research subjects, members of their communities, or similar populations (where appropriate) in the design of our study and our informed consent process?
2. How are we designing the informed consent process to ensure that research subjects receive all the information that they need in a way that is understandable to them in order to decide if they wish to participate in the research or not?
3. What actions are we taking to ensure that the human subject feels truly free to reject participation in the study or to drop out of a study once it has started without fearing or experiencing negative consequences?
4. What actions are we taking to create an environment in which research subjects can enjoy and find meaning in the experience of participating in research?
5. Are we appropriately using existing information and knowledge that local host institutions may have?
Introduction to Lean Research
What is Lean Research?

An approach to research designed to improve the **practice**, **results**, and **impact** of data collection involving people and communities targeted for development and humanitarian interventions.
Why Lean Research?

The Lean Research approach was co-developed by faculty and researchers at MIT D-Lab, the Fletcher School and the Feinstein International Center at Tufts University who had observed the following:

1. Human subjects research in vulnerable contexts is a form of development intervention.

2. Power and social dynamics- as well as prior experience- influence research results.

3. Research fatigue among vulnerable populations is growing, and with good cause.
The conceptual foundations

- Inspired by lean production and human-centered design, Lean Research focuses on **continual improvement** in the research production process, opening space to innovate familiar routines.

- Lean Research is **enjoyable** for research subjects, produces **value** for communities, generates **actionable findings** and is **efficient** in terms of the cost and burden of research efforts relative to their impact.
The Lean Research approach

- Lean Research is an approach that can be used in qualitative, quantitative, and mixed-methods studies across a range of academic disciplines and types of research.

Photo credit: Ruth Park, MIT D-Lab
The Lean Research Framework

Lean Research uses a framework of four principles as a starting point to make systematic improvements to the research process in order to enable both the research process and outputs to benefit study subjects as well as research clients, decision-makers, and donors.
Lean Research Principles

4Rs

- Rigor
  - Ensures the integrity of the research process and validity of the findings
  - Focuses on practices to increase the accuracy and truthfulness of the information we’re collecting
  - Data is:
    - Documented fully and accurately
    - Kept safely and securely

- Relevance

- Respect

- Right Size
Rigor
• Addresses questions that matter to various stakeholders

Relevance
• Findings are understandable and accessible to diverse audiences

Respect
• Findings can be understood by research participants

Right Size
• Findings inform decision-making and action at multiple levels
Lean Research Principles

4Rs

Rigor
- Prioritizes the dignity and delight of the research subject during the research process
- Honors research participants’ right to be fully informed about the research and its uses
- Creates a real, meaningful, understandable informed consent process in which research subjects feel free to opt out of participation.

Relevance

Respect

Right Size
Lean Research Principles

4Rs

- Rigor: Research scope and methods are well suited to research objectives and the importance of the research questions.
- Relevance: Study costs and burden to research participants are proportionate to potential for impact and relevance to their lives.
- Respect: The time of research participants is valued and taken appropriately.
- Right Size:
Putting Lean Research into practice

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Putting Lean Research into practice

EC.745X
Lean Research Skills for Conducting Interviews

About This Course

Interviews are one of the most common and powerful field research methods, used across a wide variety of disciplines and topics. Whether conducting research in a business or study, an evaluation of an existing product or service, or gathering insights for a
A growing community

- The Lean Research community includes over 100 researchers, practitioners, donors, and policymakers working in the international development and humanitarian spaces.

- The community provides a safe space to learn from peers, experiment with implementing Lean Research practices, and continue co-developing the approach.
Common pitfalls in international partnerships

1. Rushing into relationships to meet grant deadlines
   Start prior to grant opportunities

2. Inaccurate up-front assessment of collaborators’ skills or capacity to implement
   Start small and low-dollar

3. Mis-aligned values, approaches or ways of working
   Build in a practice of learning and reflection (AARs)
ASPIRE: Achieving Sustainable Partnerships for Innovation, Research, and Entrepreneurship
Avoiding common pitfalls
ASPIRE’s complexity-aware ToC

If we... (Activities)  And... (Assumptions/Context, examples)  Triggering (Mechanisms)  Then, we will see (intermediate results)  And see.... (Outcomes)  Contributing to... (Impact)

- Build an admin. culture supportive of university-based I & E
- Remove disincentives to collaborate on research and innovation
- Strengthen internal systems for technology transfer
- Build and strengthen linkages with universities and private sector
- Build faculty, staff, researchers & students skills to translate research results to non-technical audiences
- Build capacities in faculty, researchers, and students to conduct world-class dev research & innovation
- Build capacity of faculty, staff, researchers to support student innovation and entrepreneurship efforts
- Build capacity at UVG & MIT to provide world-class training on R&I for development

- Basic cultural alignment exists or is built
- Benefits of change are seen and/or experienced
- Collaboration is de-risked
- Partners have demand for research results
- Students have exposure to MIT and/or CIT model
- Faculty & staff exposed to MIT D-Lab model and observe early benefits at UVG

- Willingness to change among key decision-makers
- Faculty want to participate in CIT network
- Partners gain confidence to collaborate
- Students are motivated to participate in I & E activities
- Faculty & staff are motivated to participate in CIT network, make changes to teaching & research and collaborate

- Stronger campus systems for research + innovation
- Increased multi-disciplinary dev research activity
- Increased engagement between researchers and outside partners
- Increased ID of dev research & innovation opportunities
- More faculty, students engage in dev-oriented innovation & research
- New curricular and training offerings

- Consolidated CIT Network (replicable model) for innovation and entrepreneurship at UVG (Ob. 1)
- Students, faculty, & researchers launch innovation-driven ventures (Ob. 1.1)
- Effective technology transfer (Ob. 1.2)
- Local stakeholders capitalize on UVG research and tech. for innovation and decision-making (2.1)
- Increased production of locally-relevant research and innovation (1.1)
- UVG becomes a regionally-recognized model for training in R&I & 4 Dev (1.3)
- More successful UVG dev. innovations & spin-offs
- Increased incorporation of innovation into existing SME operations (AGEXPORT)
- Translation of evidence & innovation into dev policy, programs, practices (O 1.2)

Other Central American universities change processes and improve research capabilities, adopting aspects of CIT model

Demonstrated pathway for university research, spin-offs/start-ups in GT and Cen. Am. to contribute to inclusive, sustainable economic and social progress
ASPIRE’s program-wide AAR

Photo credit: ASPIRE
ASPIRE’s research AAR
Thank you!