Welcome!

Lecture 5:
Developing, Conducting, Monitoring and Evaluating IR Projects

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MiDATA

Key Takeaways

Clear Proposal Definition

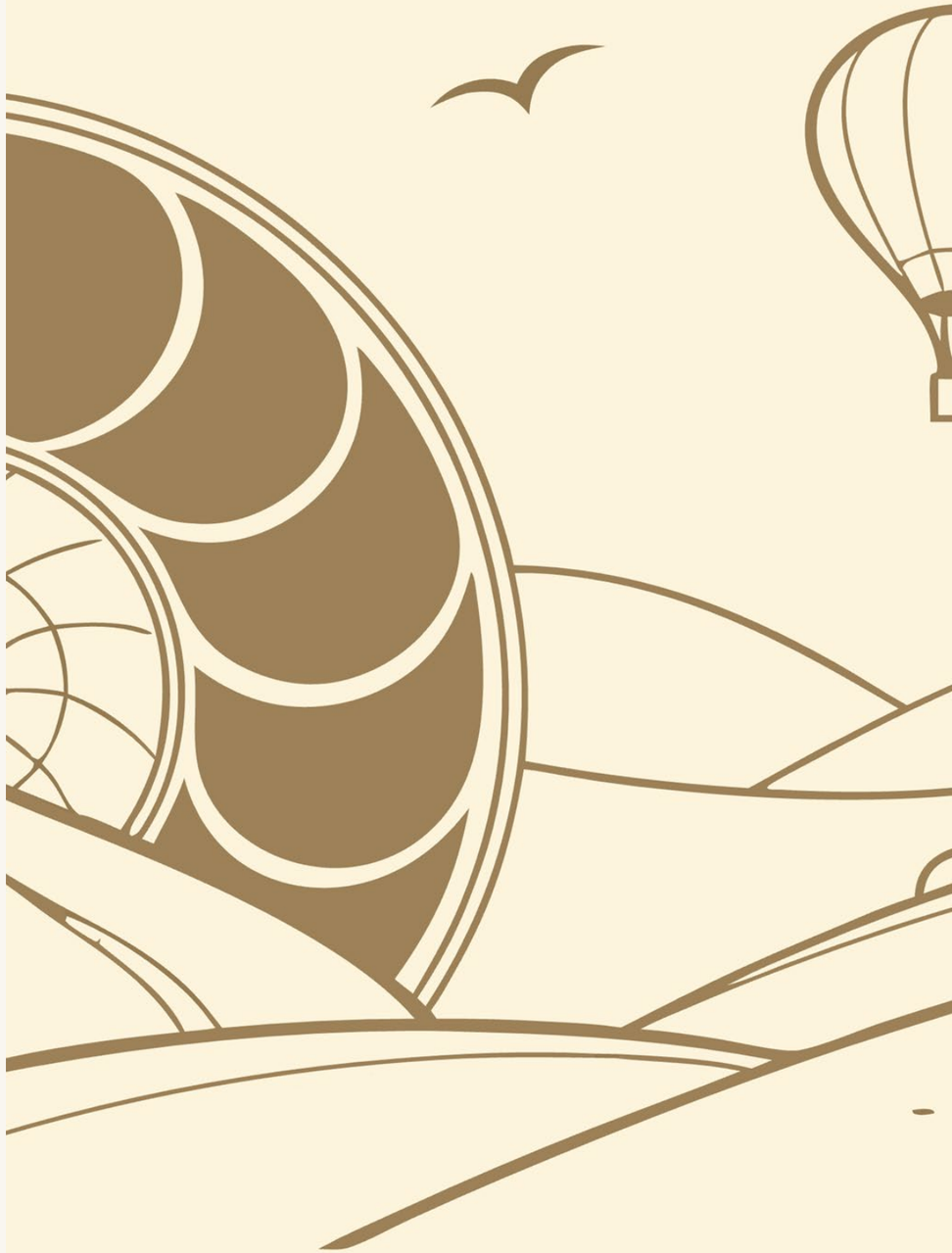
Strong proposals clearly define the problem, context, methods, and expected impact to secure funding and guide execution.

Methodological Appropriateness

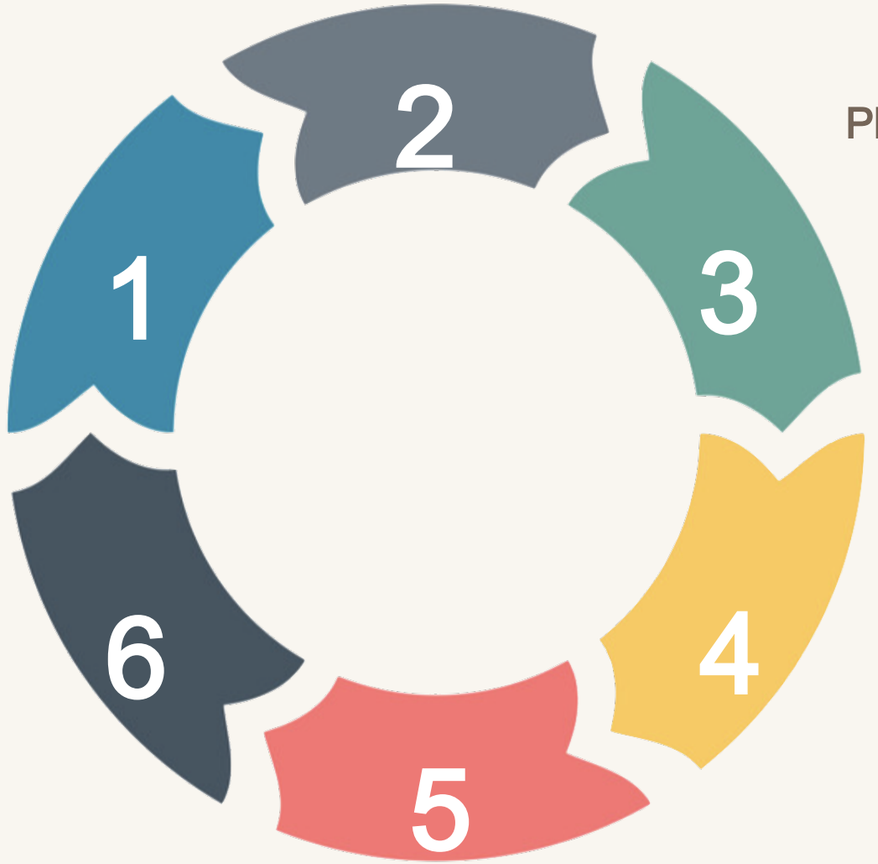
Selecting the right qualitative, quantitative, or mixed methods is crucial for addressing research questions effectively and yielding robust findings.

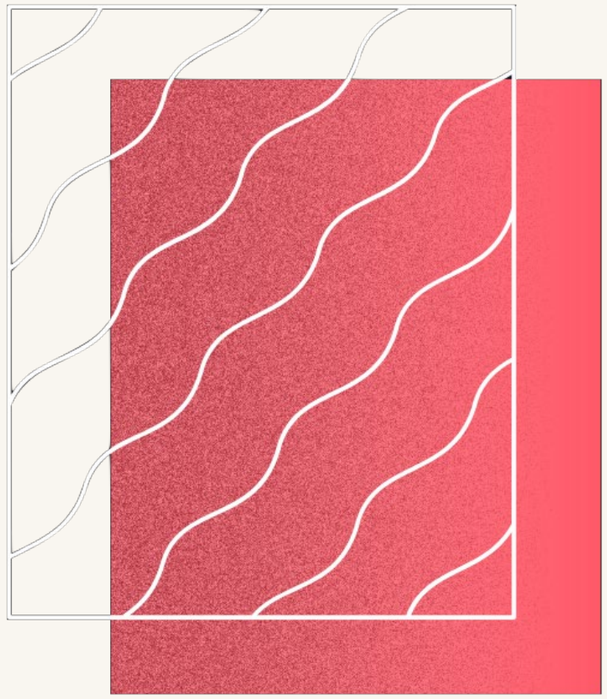
Continuous Improvement

Embracing continuous monitoring and evaluation is essential for improving implementation processes and ensuring the long-term sustainability of interventions.



The Implementation Research Cycle



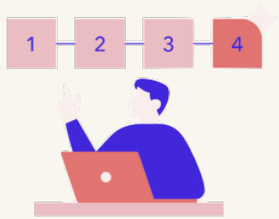


Developing an IR Proposal

Parts of an IR Proposal

1. Introduction

Title, rationale, problem statement, objectives, literature review



2. Research Design

Participants, methods, data collection, analysis, quality management, ethics

3. Project Plan

Timeline, research team, budget and justification

4. Impact

Monitoring and evaluation plan, capacity building plan, dissemination plan

5. Supplements

Summary, table of contents, references, appendices, CVs

Developing Research Questions for IR

1 Describe the health situation and intervention

Examine magnitude of the problem, distribution of health needs, risk factors, awareness levels, utilization patterns, and cost-effectiveness of interventions

2 Provide information to evaluate ongoing interventions

Assess coverage of priority needs and target groups, acceptability and quality of services, cost-effectiveness, and health impact

3 Analyze causes for missed targets

Investigate issues of availability, acceptability, affordability, and service delivery problems

4 Prioritize based on key criteria

Consider relevance, avoidance of duplication, urgency, political acceptability, feasibility, applicability of results, and ethical acceptability

Example: How to Approach Developing an RQ in IR

Review the following overview of a problem situation:
In District Y (population 145 000), sanitary conditions are poor (5% of households have toilets) and diseases connected with poor sanitation such as hepatitis, gastroenteritis and worms infestations are very common.The Department of Health has initiated a sanitary project that aims at increasing the percentage of households with toilets by 15% every year.The project provides materials and the population is expected to provide labour. Two years after the program began less than half the target was reached.

Review these questions, and provide a rationale for the need to conduct research to obtain answers to the problem:

- What is the discrepancy?
- What factors can explain this difference?
  - Service-related factors? Failure to inform and involve the community? Bottleneck in the supply of materials? Training and effectiveness of sanitary inspectors?
  - Population-related factors? Lack of understanding of relationship between disease and sanitation? Poverty?
  - Physical factors? Ecosystems? Hard soil? Area always flooded?

Questions to consider when developing an RQ

Relevance & Urgency	● Who is affected by the problem? How widespread is the problem? ● What are the existing or potential economic impacts of the problem? ● Is the research new or innovative? ● Are there any interventions that have effectively addressed this?
Applicability of results	● How will the results or recommendations be applicable to the target community? ● Is the research question of interest to researchers, policymakers, funding agencies and health care providers? ● Will it provide information required to evaluate ongoing interventions?
Feasibility	● Can you realistically conduct and report the findings in 12-36 months? ● What data is available? What data is needed?

Monitoring & Evaluation

A plan describing exactly how it will be assessed whether or not a project meets its objectives, and how you intend to keep close track of changes in the project plan and problems encountered.

The monitoring component includes:

- identifying resources needed for the project (staff, supplies, funds)
- how you intend to monitor the roles and activities of each team member

An evaluation plan:

- identifies who will use the evaluation findings
- describes information needed, sources and evaluation methods
- tracks the expected impact of the intervention

Dissemination Plan

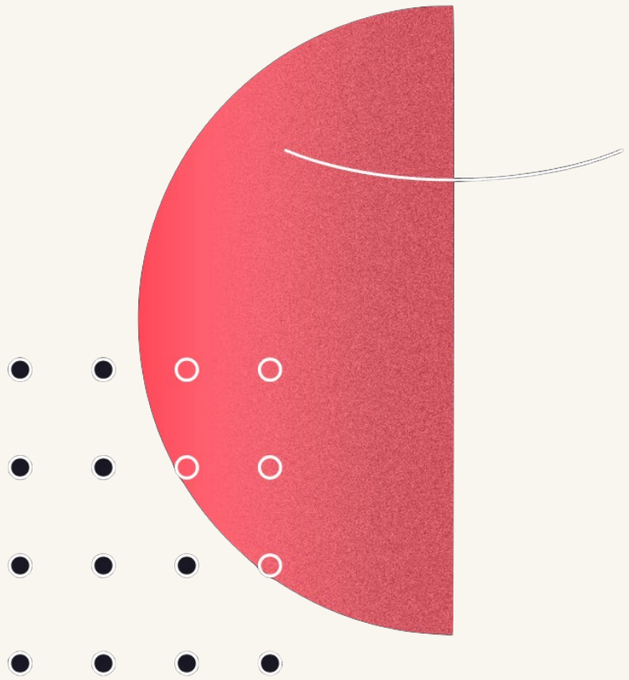
Describe how you intend on disseminating information from the project.

Example dissemination activities:

- Presentation of research findings at national and international conferences
- Meetings with local and national stakeholders to discuss research findings
- Policy advocacy briefs
- Media (e.g. press releases, newspaper articles)

Include:

- An estimate number of the refereed and professional publications you intend to develop during each year of the project
- The number and names of the academic and professional conferences you intend to attend each year
- Educational or informal community presentations you propose to make during each year of the project (e.g. workshops or training programs, information sessions, policy briefings)



Planning and Conducting an IR Project

Research Designs in IR

Before -after or time series

Introducing an intervention, and examining its outcomes.

Example: Examining the impact of health insurance introduction on healthcare access using beforeafter design.

Comparing intervention to control groups

Example: Comparing maternal health outcomes between districts with new approach versus similar control districts.

Clusters Randomized Controlled Trial

Comparing clusters of randomly chosen intervention groups with clusters of randomly chosen control groups.

Example: Among 10 districts, 5 districts are randomly selected to test impact of using mobile phone reminders for TB treatment. The other 5 districts were control sites.

Repeated Measures

Collecting data from the same population, with different measures or different interventions.

Example: Use quantitative, qualitative or mixed methods to analyze main factors resulting in changes in the use of health services by pensioners after retirement.

Research Methods: Qualitative Methods

Qualitative research explores values, attitudes, opinions, feelings, and behaviors to understand how these affect individuals It's useful for theory generation, policy development, improving practice, justifying change, and illuminating social issues. The results are descriptive or explanatory rather than predictive.

In -Depth Interviews

Purposeful conversations directed by the researcher using an interview guide. The researcher encourages detailed responses without leading the participant. Typically recorded and transcribed, with average length of one hour.

Focus Group Discussions

1-2 hour guided discussions with 6-10 similar respondents focusing on defined topics. Conducted in informal settings to reveal beliefs, opinions, and motives, with data enhanced by participant interaction.

Field Observation

Systematic observation of verbal and non-verbal behavior using structured recording forms. Researchers may participate in the setting over extended periods or observe without participation, collecting data through observation and note-taking.

Research Methods: Quantitative Methods

Quantitative methods involve collecting and analyzing objective data, often in numerical form. Common data collection strateg ies include structured observation, questionnaires, and performance-based instruments.

Quasi -Experimental Research

Examines cause and effect by manipulating independent variables and measuring dependent variables. Typically includes experimental and control groups.

Correlational Research

Determines relationships between variables without manipulation. Describes relationships using correlation coefficients (-1 to 1) and can be used for prediction when strong relationships exist.

Monitoring & Evaluation Research

Tracks implementation progress against original design, identifies weaknesses, tests assumptions, and adjusts processes. Often uses routine health information systems supplemented by special surveys.

Research Methods: Mixed Methods

Sequential Explanatory

Quantitative data is collected first, before qualitative data is collected. Typically used where initial quantitative results are used to inform secondary qualitative data collection. Weight is typically given to the quantitative data.

Concurrent triangulation

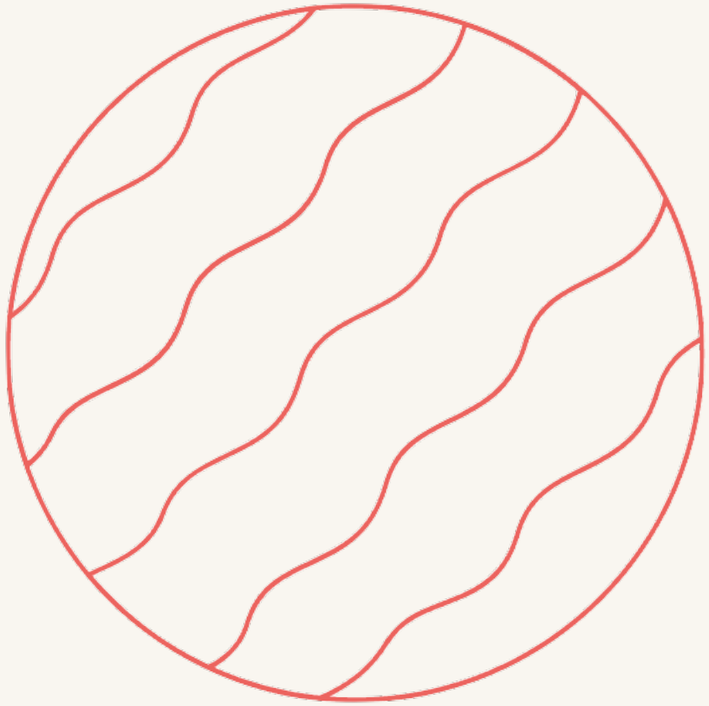
Quantitative and qualitative data are collected simultaneously and then the two datasets are compared to see if there is convergence, differences, or some combination of the two. The weight given to the quantitative and qualitative findings is equal.

Sequential Exploratory

Qualitative data is collected first, before quantitative data is collected. This design tends to be used when the primary purpose is to explore a phenomenon (e.g. determining the distribution of a phenomenon in a given population). Weight is typically given to the qualitative data.

Concurrent embedded

Quantitative and qualitative data are collected simultaneously but there is a primary method that guides the approach. Either quantitative or qualitative data will be used to provide a supportive or supplementary role based on the primary data type.



Monitoring & Evaluating IR Projects

Monitoring & Evaluation: Methods

Information log

Keeps track of feedback from stakeholders, related news stories reported and articles written, and the number of times research has been cited in the academic literature

Survey

Conducted with stakeholders from the target audiences to provide feedback e.g. questionnaires can be sent 6 months and 1 year after a dissemination event

Interviews

A series of key informant interviews with stakeholders at various levels of the health system can provide insight into if and how research was used

Steps to Create a Monitoring & Evaluation Plan

1 **Stakeholder consultation**

Consult stakeholders to facilitate the selection of appropriate and useful M&E indicators, and to ensure authentic needs are being met.

2 **Translate your project's goals to variables that can be objectively measured**

Use the Logic Model Matrix to select appropriate indicators of project activities, outputs and outcomes.

3 **Assign responsibilities for implementation**

Determine the data collection plan including which stakeholders are responsible for collecting specific data, how quality control will be ensured at each stage, how often data will be collected, and the format of the data

4 **Set targets**

Set targets, in collaboration with stakeholders, to have a concrete measure by which to judge if the project is progressing as expected

Create a table on the different objectives / evaluation domains, selected indicators, and data collection methods

Case Example: Developing the M&E plan for the use of vouchers for scaling up insecticide -treated nets in the United Republic of Tanzania (2003 -2007)

Step 1: Stakeholder consultation

"The M&E strategies were developed during scheduled meetings of Tanzania National Voucher Scheme (TNVS) partners. The stakeholders included officers from the National Malaria Control Programme, groups involved in implementing insecticide -treated net (ITN) distribution activities in Tanzania, and researchers from the Ifakara Health Research and Development Centre (IHRDC) and the London School of Hygiene and Tropical Medicine (LSHTM)."

Step 2: Select indicators

They investigated the programme effects over five main domains:
(1) ITN coverage among target groups
(2) provision and use of reproductive and child health (RCH) services
(3) 'leakage' of vouchers (i.e. in terms of non-target groups receiving vouchers, and vouchers being used to purchase items other than ITNs)
(4) the commercial ITN market
(5) cost and overall cost-effectiveness of the scheme

Indicators to measure the progress are shown on the next slide.

Step 3: Assign responsibilities

Independent researchers from IHRDC and LSHTM conducted the M&E activities: collecting and analysing data, and reporting findings to the implementers who included the National Malaria Control Programme and groups involved in implementing ITN M&E activities in the country.

Step 4: Set targets

Targets for the effects of the voucher programme included:

- Measuring the effect of the voucher scheme on ITN use among pregnant women and children under five years of age.
- Use of RCH services including the voucher scheme.
- Effect of the scheme on RCH service provision.
- Pregnant mothers' use of RCH services, their voucher knowledge and use, ITN use and knowledge of malaria in pregnancy.

Monitoring & Evaluation Table

Evaluation domain	Indicator(s)	Surveys			FDGs and in-depth interviews	Retail census	Voucher tracking	Cost analysis
		House-hold	Facility	Exit				
Coverage of target groups (ownership, use)	• Household ownership of at least one net/ITN; • Individual slept under a net/ITN on the night prior to the survey	X	X	X				
Provision and use of RCH services, including voucher scheme	• Currently/recently pregnant woman* attended ANC; • Mean weeks of gestation at time of first ANC visit; • Received a voucher; • Received 1 dose of SP as IPTp; • Received 2 doses of SP as IPTp	X	X	X	X		X	
Leakage of vouchers	• % of voucher recipients who could be identified, interviewed, and confirmed they received a voucher				X		X	
Impact on ITN market	• % of wards with at least one retail source of ITNs, insecticide	X				X		
Cost and cost-effectiveness	• Cost per voucher • Delivered; • Cost per ITN delivered	X						X

Indicators of voucher coverage were calculated for both currently pregnant women and for women who had a live birth in the 12 months preceding the survey.
ITN = insecticide-treated net; RCH = reproductive and child health; ANC = antenatal care; SP = sulphadoxine-pyrimethamine; IPTp = intermittent preventive treatment in pregnancy

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Reflect!

How can you distinguish between an implementation failure and a failure of the intervention itself?

End of Lecture 5

Next up Lecture 6: Ethics and Equity in Global Health AI IR

You now have the knowledge, tools, and ethical framework to design AI-enabled IR projects that are context-sensitive and globally responsible.