

Strengthening Research Capacity in Low & Middle Income Countries: Lessons and good practice examples for researchers and implementers

Introduction

Strengthening capacity for research in low- and middle-income countries (LMICs) is a long-term and complex process that requires continuous input at multiple levels (individual, institutional and environmental). This note outlines research capacity strengthening (RCS) lessons and good practice examples emerging from experiences and literature on the 'science' of RCS.

The [Capacity Research Unit](#) at the Liverpool School of Tropical Medicine specialises in the science of RCS. The purpose of this note is to share our experiences with institutions applying for or involved in research programmes which aim to strengthen research capacity. This includes institutions based in the UK as well as those in LMICs.



Lessons and good practice examples of strengthening research capacity

Examples presented below will help strengthen research capacity at the individual, institutional and environmental levels at each stage of the research process.

1. Applying for research funds

- Respectful and equitable relationships between research partners are essential; our research indicates that RCS programmes are more likely to be successful if they are built on existing partnerships.
- Meet all research partners and key stakeholders involved in the RCS programme face-to-face to discuss their contributions, synergies, strengths, challenges and weaknesses.
- Ensure research partners and stakeholders have a common understanding of the funding call, and agree the goal of their proposed programme and the pathway for achieving impact.
- Establish a regular, participatory communication process and define the roles for each partner and their contributions to the application to help facilitate an equitable and effective partnership.

2. Starting up a new RCS programme

- Hold participatory inception meetings to develop a detailed RCS programme plan based on an explicit pathway to impact (e.g. a theory of change). These meetings should engage key players beyond the grant holders (e.g. researchers, laboratory technicians, managers, representatives from government, civil society, industry and think tanks) to ensure the programme addresses national needs, facilitates research uptake and promotes sustainability.
- Plan for annual partner meetings with clear objectives, ensuring all partners contribute to the aims and agenda of the meeting. Use the workshop to agree the contents, timing and responsibility for the RCS programme work plan.
- Publicise the new programme within, and beyond, partners' institutions to engage relevant networks and to ensure RCS activities have broad impact.

3. Embedding RCS programmes within institutions

3a. Research strategies and quality assurance

- RCS programmes should complement the institution's research strategy, which itself should be linked to an institutional plan with activities, timings and monitoring indicators.
- There should be institution-wide and high-level buy-in (e.g. Head of Department, Faculty Dean, Vice Chancellor) for the RCS programme and the research strategy.
- Carefully think through the arguments that are likely to persuade institutions and external stakeholders to invest in RCS programmes in the face of high teaching loads in LMICs.
- Plan for the financial sustainability of changes introduced through RCS programmes from the outset.
- Explore opportunities to strengthen research offices, which support and track research activities and promote research quality, and to share skills and good practice between partners (e.g. through staff exchanges).

3b. Research facilities

- Improve access to academic journals for LMIC partners through registration with www.research4life.org and similar schemes.
- Plan to empower and train laboratory staff, who are critical to much research but are often overlooked in programme planning and implementation.

- Develop a participatory laboratory working group so programmes can make 'smart decisions' about purchasing and maintaining equipment and supplies, and technical training.
- Laboratory accreditation will significantly enhance international research credibility and opportunities to market laboratory services.

3c. Research training, supervision and mentoring

- Make programme-funded training available to related disciplines across the institution to maximise capacity strengthening impact.
- Actively include research support staff (e.g. accountants, administrators, technicians) in training opportunities.
- Identify opportunities to share skills, training and good practice across programme partners.
- Establish mentorship and supervision systems which are sensitive to culture and gender; consider developing an informal contract between supervisors and students defining their roles.

3d. Research uptake

- Engage policy makers and influencers throughout the RCS programme including, if appropriate, as co-supervisors of research students.
- Develop a research dissemination plan and include research uptake training for researchers in the programme plan.

Capacity Research Unit (CRU) at LSTM: pioneering methods and approaches for RCS

CRU specialises in the science of RCS. We are expanding practical and theoretical knowledge about what works, and does not work, for RCS in LMICs. We focus particularly on strengthening capacity for research and laboratory systems and have developed an innovative and robust approach for designing, tracking and evaluating RCS programmes which works in different settings. This approach includes two pioneering steps, which are often missing in RCS programmes:

- defining the RCS goal and the pathways for change with all partners involved in the RCS programme, and
- describing the 'optimal' capacity needed to achieve the goal, based on best evidence from the literature and consultations with experts. This provides a 'benchmark' and indicators against which to assess baseline capacity and to measure and track change.

By applying this approach to diverse RCS programmes across LMICs, we have identified areas that are important for RCS programmes that target universities or research institutions (see Section 3 above).

We work closely with grant makers and review panels, using qualitative research to help them improve grant making and grant management processes. We feedback research data from site visits and consultations grant makers and RCS implementers so they can adjust and improve their programmes in real-time.

For more information about CRU contact:

CRU Programmes Manager Lorelei.Silvester@lstmed.ac.uk
<http://www.lstmed.ac.uk/research/centres-and-units/capacity-research-unit>