Practical guidance for improving evaluations of research capacity strengthening programmes

Introduction

In 2019, the Centre for Capacity Research, Liverpool School of Tropical Medicine (LSTM) and the African Population and Health Research Centre (APHRC), collated evidence to inform guidance about how to improve evaluations of, and indicators for, research capacity strengthening (RCS) programmes in low and middle-income countries (LMICs). The project was funded by the internal DFID Strategic Evaluation Fund and addressed the linked problems of the lack of a) frameworks and robust indicators to determine the impact of RCS programmes and b) a unifying, evidence-based approach to underpin funders' substantial investments in RCS efforts. The RCS evaluation recommendations and guidance resulting from this project should enable comparisons of RCS progress among projects and schemes, and will facilitate real time learning and tracking along a trajectory to achieve RCS impact (For the full report see https://www.gov.uk/dfid-research-outputs/a-framework-and-indicators-to-improve-research-capacity-strengthening-evaluation-practice)

Approach to the project

Evidence was predominantly drawn from peer-reviewed and grey literature and an analysis of, primarily DFID-funded, RCS programme documents. An RCS evaluation framework[1] was drafted by refining and harmonising existing frameworks, and indicators that were generic to diverse types of RCS programmes were agreed through workshops and consultations with RCS funders, implementers, managers and evaluators. Indicators were mapped onto the framework, guidance about how to design and conduct more rigorous RCS evaluations was developed, new RCS evaluation concepts were created and next steps in the process of testing and validating the framework and indicators were outlined.

The RCS evaluation framework and indicators

RCS is generally conceptualised as being targeted at any or all of three levels - individual, institutional and societal. These levels therefore formed the backbone of the framework and sub-components were added within each of these levels. Examples of indicators for each sub-component are provided in figure 1: the full list of indicators[2] is included in the report.

Figure 1. RCS evaluation framework

Target level for RCS	Examples of indicators
Individual level	
Provision and quality of training for the research team	• Quality of graduates from RCS programmes (e.g. technical capability, critical thinking skills, confidence, empowerment, employability) appropriate for career stage • Individualised training needs assessments conducted and reviewed
Recognition of research leadership/esteem	• Increase in confidence and empowerment to take leadership positions • Able to create and/or manage multi-disciplinary teams
Career trajectory	• Evidence of progressing in chosen career • Number of networks and collaborations joined or initiated

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[1] This framework comprises a list of broad categories within which indicators can be mapped. It is different from a traditional evaluation framework which incorporates substantial detail on evaluation questions, approach and methods.

[2] https://assets.publishing.service.gov.uk/media/5d10a840e5274a06648dca1f/Annex_1_RCS_evaluation_indicators_FINAL_clean_14jun19_to_EM.pdf

Institutional level		
Career pathways for the research team	•	Transparent, equitable promotion criteria and processes, and career progression
	•	Mentoring scheme (inter-generational) available and effective
Sustainable provision of appropriate, high quality training	•	Students' completion, progression and employment rates
	•	Quality and sustainability of courses and graduates including multi-disciplinarity capability
Nationally/internationally competitive research and grants	•	Consistent, high quality research productivity (grants, publications, patents, start-ups, commercialisation)
	•	Ability (or on a trajectory) to support the 'research pipeline' from basic science to community/ behavioural
Research environment – finance, library, IT, labs etc	•	RCS strategic plan, with funding, implemented and monitored
	•	% of budget spent on strengthening research systems
Societal (national/international level)		
National: research councils/research productivity	•	Ability to manage transparent, efficient and competitive processes for allocating national research funds
	•	Research productivity (funds, publications, patents) + trends
International: networks/ collaborations	•	Research hubs – number, diversity, esteem, infrastructure
	•	International mentorship
Research impact and user engagement	•	Research-influenced policies
	•	Innovations that impact on society

Several indicators were identified for each of the sub-components. Where indicators were unknown or unavailable, the topic area of interest was indicated against the framework sub-component. Further work will be required to develop RCS evaluation indicators where these do not exist, and to test the indicators in RCS programmes.

New RCS evaluation concepts

Two new concepts emerged from the project. Firstly, it is important to ensure that the over-arching theory of change which describes how the overall scheme will achieve impact, and the theories of change for each funded RCS project within a scheme, are all aligned. Secondly, funders of RCS programmes can maximise evaluations of impact by explicitly capturing the RCS 'ripple benefits' that inevitably occur across the interfaces between individuals, institutions and societies. These concepts were incorporated into the guidance and recommendations for RCS evaluations. They address the current problems faced by RCS funders created by the lack of a unifying, evidence-based approach to underpin their RCS efforts. They help to moderate unrealistic expectations that investments in individuals should have direct high-level impact and they will make alignment between the scheme-level goal and the goals of RCS projects within a scheme, much more explicit. Combined with the validated RCS framework and indicators, incorporation of these concepts into new and existing RCS schemes will facilitate intra- and inter-scheme comparisons and enable a much more rigorous, harmonised and effective evaluation of RCS schemes.

Practical guidance and recommendations for improving RCS evaluations

The recommendations and guidance developed through the project are aimed at funders of RCS schemes, programmes and projects. They have been arranged according to whether they apply a) to the commissioning and design of RCS programmes and schemes, b) to the evaluation of RCS projects, or c) general RCS principles concerning evaluations. They have also been arranged roughly in the order in which they are likely to be considered and implemented (figure 2).

Figure 2. Practical guidance and recommendations for improving RCS evaluations

General recommendations and guidance concerning principles of RCS evaluation
There should be a change in language and emphasis away from 'researchers and research support staff' towards the **'research team'** in recognition of the important inter-dependency of the researchers, research managers and other members of the research team in strengthening research capacity
RCS evaluations need to **involve target users** so that the content of the evaluation, and the data collected and generated, meet their needs
RCS evaluation indicators need to be designed strategically and to be **robust, valid and valued**
RCS evaluations should balance **quantitative and qualitative indicators at all three levels** of the RCS evaluation to capture cultural, behavioral, attitudinal and systems changes
RCS evaluations need to affirm that it is the **'contribution' of an RCS investment rather than 'attribution'** that should be measured and that RCS impact occurs at scheme or programme level irrespective of the level at which RCS investment occurred (providing that RCS activities are aligned within an over-arching theory of change)
Emphasise through strategies and actions that the purpose of RCS evaluations is to **promote learning rather than for accountability**
Recommendations and guidance for the evaluation of RCS projects
RCS projects should be 'standalone' or associated with, but not embedded in, larger research projects. Embedding makes it difficult to track progress along the activities-outputs-outcomes pathway and, for the majority of researchers, their primary goal will be to achieve the outcomes of their research project rather than those of the embedded RCS project
Ensure that RCS implementers **establish a baseline of research capacity** against which to track progress and impact
Consider **using trends of an increase in pre-specified RCS outputs and outcomes** over time to demonstrate that a project is on a trajectory to achieve impact
Explicit indicators for evaluating **RCS equity and inclusivity** should be included in RCS evaluations if these are important aspects of the project
Where relevant, projects should incorporate **indicators of sustainability** of research capacity improvements throughout a project's lifetime
Incorporate **indicators of multi-disciplinarity** into RCS evaluations as this demonstrates the sophistication of research capacity of individuals, institutions and nations
Incorporate **RCS indicators that demonstrate employability** (e.g. innovation and entrepreneurship) since these attributes are important for achieving the longer-term goal of improving socio-economic development
Ensure evaluations explicitly capture the '**ripple benefits**' that occur across the interfaces between individuals, institutions and societies
Consider providing limited funding to **continue measurements after the end of a project** to improve understanding of what does/does not work for long term impact of RCS.
Recommendations and guidance for the commissioning and design of RCS programmes/schemes
Use **good quality RCS evaluations** to demonstrate the value of investments, the uptake of evidence by stakeholders and the contribution of RCS to achieving lasting change
An **over-arching theory of change** which describes how the overall scheme will achieve impact needs to be developed before commissioning projects, and the projects' own theories of change, activities and monitoring indicators should be flexibly aligned within the scheme ToC

> RCS scheme funders need to explicitly decide how to **balance the criteria of 'excellence' against 'equity'** since the former may imply focusing on a few high-performing centres and the latter implies support for a wide range of potentially poorly performing centres
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> The larger the programme or scheme, the more the RCS impact indicators should be focused at **societal level because this is the level at which programmes expect to have their impact**
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> RCS funders should consider providing a **specialist scheme-level team** to help RCS implementers generate high quality data against RCS indicators since these data will require mixed methods (especially qualitative methods) expertise

Next steps for achieving progress in improving RCS evaluations

1. **Make sure that new RCS programmes/schemes have an overarching theory of change (ToC) for achieving RCS impact and that a small number of important generic ToC-related indicators are included in every project within the scheme.**

Lack of an over-arching theory of change for many RCS programmes is a major barrier to being able to demonstrate progress along a trajectory towards impact. It also limits funders' ability to commission a cohesive set of projects that all contribute to the scheme's overall RCS goal. Incorporating a few of the same carefully chosen ToC-related RCS indicators in every project, will enable comparisons to be made between projects within a scheme (and potentially between schemes) and allow collation of RCS data from across all projects. The indicators should be chosen so that they are valued by the RCS project implementers and are not too onerous. Provision of scheme-wide support to RCS implementers to collect good quality data against these indicators may be helpful.

2. **Test the RCS framework and indicators**

This project has identified a range of broad indicators (or RCS topics to which indicators could be applied) within each of the three levels of the RCS evaluation framework. Indicators-of-interest need to be selected by RCS scheme organisers and applied to new, and possibly existing, RCS initiatives. As this RCS evaluation approach is innovative and experimental it will be important to envisage the testing of the framework and indicators as a research project with prospective design, rigorous methods and robust data analysis. It will also be important to evaluate the skills, time and resources needed to produce data against these indicators to help funders and practitioners decide when and how they should be applied to RCS evaluations.

3. **Develop methods for measuring important RCS topic areas for which there are no existing valid and robust indicators**

There are several RCS topic areas that have been identified through this project as important and generic, but for which there are no existing widely accepted measures. Many of the indicators for these topics are likely to be qualitative and so social science research skills will be needed to generate high quality data against the indicators. Examples include measures of graduates' critical thinking skills, confidence and empowerment in potential research leaders, multi-disciplinary research capability, and entrepreneurship.

4. **Validation of project findings by other international RCS funders**

RCS evaluations are problematic for many development funders and the findings from this project therefore have the potential to result in a step change in the way RCS evaluations are designed and conducted globally. However, substantial data for this project were derived from an analysis of DFID-funded programme documents. It is therefore important to validate these findings beyond DFID programmes by applying a similar, though likely less intense, analysis of programmes and consultation process with international non-DFID funders of RCS programmes and schemes.