Excellence in the context of use-inspired research: Perspectives of the global South

By Suneeta Singh, Priyanka Dubey, Apurva Rastogi, and Daniel Vail (2013)

IDRC's Strategic Evaluation on Research Excellence aims to define and articulate what research excellence means in a research for development context, analyze tools and approaches for evaluating research excellence, and identify innovations that could be tested. The first phase of the strategic evaluation consisted of reviewing existing literature as well as internal and external practice on research excellence. In addition to this output, three others were produced in the first phase: Review of Key Debates (Méndez), Understanding Research Excellence at IDRC (Ofir and Schwandt), and Review of Existing Frameworks (Coryn et al.).

Introduction

IDRC has launched a strategic evaluation to answer the question "What is research excellence in the context of research for development?" IDRC funds research intended to generate learning and change. It supports Southern organizations in delivering high-quality ideas, understandings, and solutions to advance development through new knowledge. The scope of development problems requiring research is immense, spanning geographies and thematic areas and involving a variety of stakeholders. But what does excellence in international development research look like and how do different perspectives inform it?

Amaltas[1] conducted an enquiry into how Southern researchers view research excellence and how their experiences can inform the creation of a framework for the assessment of research excellence at IDRC. Together with work being undertaken by other researchers involved in the strategic evaluation, this study is intended to contribute to a more global analysis and summary of current discussions on questions such as: where is the research excellence field moving; what are the key debates, and who are the different proponents of these debates; and what is the spectrum of definitions and approaches being used? This study provides a preliminary understanding of views of researchers working on issues of the global South. It is not an in-depth study of such views, which would require quite a different scope and scale of study.

[1]Amaltas is a research and consulting organization based in Delhi, India. Amaltas's mission is to work in the development sector to provide high-quality research and consulting services directed to accelerate improvements in the lives of people.

Organization of the report

The report begins with a brief description of the kind of research that IDRC funds. Section 1 provides a short discussion of the purpose of the study—its objectives and the methods used to carry it out. It describes the tools that were used, the respondents approached, the phasing of various sub-studies, and the manner in which the authors analyzed and consolidated the data. Section 1 also provides an overview of the context of this study. Section 2 discusses the findings of the study against a backdrop of related literature. It draws upon data to identify areas where the analysis compares or contrasts with the debates and discussions in published literature.

Section 3 considers the implications of the study findings for IDRC's work with organizations in the global South. It presents the views of partners on the conceptual building blocks of research excellence. Finally, Section 4 reflects on findings to make recommendations for a framework to assess research excellence in IDRC's work with Southern grantees. This section discusses what needs to be accounted for in the eventual construction of an IDRC framework.

Section 1. Setting the context

The nature of IDRC's work

IDRC's Strategic Framework 2010-2015[2] states: "Knowledge and innovation . . . remain core tools for empowerment. As such, they are critical ingredients in the quest for greater prosperity, security, and equity. . . . IDRC firmly believes that in assisting its research partners to produce, disseminate, and apply new knowledge, it can contribute to positive change in the developing world." A core characteristic of IDRC-funded research is the manner in which several disciplines are assembled to address 'real world problems.'[3] The main tenets of IDRC work have been presented as supporting credible scientific research that is relevant and useful to policy makers and can influence practices, technologies, and laws that contribute to sustainable and equitable development.[4]

The space that IDRC-funded research occupies can be referred to as Pasteur's Quadrant, a term first used by Donald Stokes[5] in 1997.

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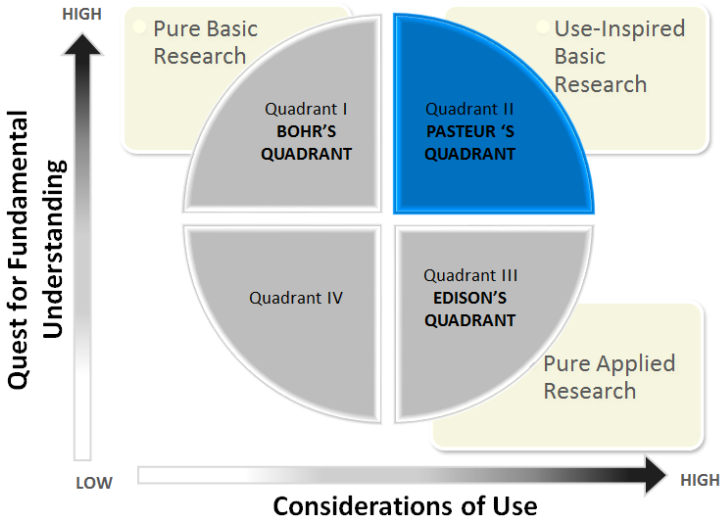
[2] IDRC. *Innovating for Development Strategic Framework: 2010–2015*. International Development Research Centre, Ottawa, Canada. 2009.

[3] This can take several forms namely, Multidisciplinary, Interdisciplinary and Transdisciplinary. For a useful definition, see TREC Centers at the Washington University School of Medicine at St. Louis here. The Consultative Committee of Sector Councils on Research and Development of the Netherlands talks of these forms as 'MIT' research, noting that most people use these terms interchangeably.

[4] P. Patrizi & M.Q. Patton. *Learning from Doing: Reflections on IDRC's Strategy in Action*. International Development Research Centre, Ottawa, Canada. 2009.

[5] D.E. Stokes. *Pasteur's Quadrant: Basic Science and Technological Innovation*. Brookings Institution Press, Washington, DC. 1997.

Figure 1. A Typology of Research per Stokes (1997)



Stokes proposed that research can be classified along a two-axis frame, where one axis represents 'quest for fundamental understanding' and the other 'considerations of use.' He suggested that researchers who engage in research primarily in a quest for fundamental understanding could be represented by Neils Bohr; those who do so primarily with the consideration of use, by Thomas Edison; and those who consider both use and contribution to knowledge, by Louis Pasteur. IDRC funded-research falls into the Pasteur's Quadrant of the frame, and this has ramifications for the research excellence framework that IDRC might apply and the lens with which it might review work that it funds.

Study objectives and methodology

The nature of this study is exploratory; it aims to derive an understanding of what researchers working on real world problems of the global South think of research excellence. The study design was developed by Amaltas with input from IDRC's Corporate Strategy and Evaluation Division (CSED; formerly the Evaluation Unit). *The study did not attempt to draw data from a representative sample; the sample provides insights, but findings cannot be generalized to the larger community of Southern researchers.* It was designed as a three-part study with each sub-study adding greater depth to information collected through the previous sub-study.

The study included three tools:

1. *General survey:* A web-based survey distributed to former and present grantees of IDRC (678) and former grantees of the Global Development Network (GDN) (401),[6] totaling 1,079 grantees. The response rate of IDRC grantees was 34% and that of GDN grantees was 17%; 301 responses were re-

[6] Note that the authors included all eligible respondents of the sampling frame working on issues of the global South; this means that some respondents in the sample did not reside in the South. In fact, as noted later in this section, some were born/educated/resided in the global North. These researchers are referred to as Southern researchers in the report.

ceived in all. As not all respondents completed the entire questionnaire, the number of responses varies by question. The survey was distributed in English, Spanish, and French and had mostly closed-ended questions. This 30-question survey serves as the major source of quantitative data for the study.

2. *Innovators survey:* A web-based questionnaire consisting of 16 (mainly open-ended) questions, distributed in English, Spanish, and French to 60 individuals identified by IDRC program officers as thought leaders; responses were received from 17 participants (of whom not all completed every question). Designed to elicit more textured information around issues explored by the general survey, the innovators survey, while helpful, did not yield as much information as hoped.

3. *Key informant interviews*: Interview requests were sent in English, French, and Spanish to the 60 innovators identified by IDRC program officers. Ten responded and were interviewed (in English) using a pre-developed interview guide. The interviews sought their insights on the major issues concerning evaluation of research excellence that were emerging from the surveys. These interviews were a very rich source of nuanced qualitative information.

Anonymous quotations from the general survey, the innovators survey, and key informant interviews are presented in boxes throughout the report to support the lessons derived from this study.

It is important to recognize that the tools were chosen based on anticipated reach. A web-based survey was chosen in order to reach as many respondents as possible in the first instance; grantees from the GDN were included to get a broader representation of Southern organizations and reduce the possibility of the survey being too IDRC-centric. The survey was sent out in English, French, and Spanish as these languages are predominantly used for scientific reporting in the global South.

One challenge of this study was defining the global South. Indicators such as the Human Development Indicator and Gross National Product Values offered some options for carving out geographies of interest; unfortunately, they did not correspond to an understanding of the South that takes into account the inequities and paucity of research capabilities that trigger support by agencies like IDRC. Ultimately, this study used a very simple distribution of countries; when it refers to the North, that includes the United States of America, Canada, Europe, Japan, and Australia. All other countries are considered to be in the global South. While this is a less than satisfactory division of the world into North and South, it offered the best solution for this study's requirements.

The term 'research excellence' is used throughout the report. *In line with the framing of the terms of reference, the study does not make a distinction between research quality and research excellence in its surveys.* The two terms should be understood to be different only when the point is expressly made. For the same reason, this study does not explore the difference in the views of those researchers practicing multi/inter/trans-disciplinary research in the surveys, although it does explore the views of the respondents to the key informant interviews on this matter. 'Multidisciplinary' has been used throughout the report to cover the three forms of joint disciplinary work, unless otherwise indicated.

Respondents to the general survey

The data and graphs in this report refer to the characteristics of the respondents to the general survey. The group characteristics of IDRC and GDN were broadly comparable in terms of research experience, locational characteristics, and use of language; thus, the findings are not disaggregated by funding organization.

Most respondents were over 40 years of age (80%), a third were women (35%), and gender differences noted across the age groups were not significant. About three-fourths (74%) of the respondents reported having over ten years of research experience, and 36% had more than 20 years. Institutional affiliation was most commonly to a government organization (35%), and less often to national and to international non-governmental organizations (29% and 15%, respectively). Affiliation to a private sector organization was 5%, while other categories represented included universities and independent researchers.

Respondents reported the following core disciplines: economics (30%); health (21%); social policy (13%); development (8%); and environment and climate change (7%), with lower representation of other disciplines. The vast majority of respondents (94%) reported that their research was multidisciplinary. About 50% of respondents said they used mixed methods in their work, while 32% used only quantitative and 18% used only qualitative methods in their research. More researchers residing in Southern countries (56%) used mixed methods in their research compared to those who lived in the North (38%).

A couple of observations from this study are referred to in further sections. Firstly, IDRC and GDN grantees carry out research in the global South; however, some grantees are in fact located in Northern countries. Over three fourths of the respondents to the general survey were born and reside in the global South (78% and 75% respectively). However, the majority of respondents (69%) had completed their last degree in the North. *The line between what is a 'Southern view' and what is not may be considerably blurred*. Secondly, English was cited as the native language by only 19% of the respondents, Spanish by 16%, and French by 6%. Therefore, 58% of the respondents had native languages other than these. In contrast, approximately 85% of the respondents reported that they use English, Spanish, or French to report research results within their own countries and 99% use these languages to report outside of their countries. About 83% of reporting outside the country is in English alone.

Section 2. Southern researchers' perspectives

Some debates in the literature on research excellence are worth summarizing before plunging into a discussion of the key study findings. The first relates to the nature of research excellence and how it differs (if at all) from research quality. A useful definition of quality research is "the scientific process encompassing all aspects of study design; in particular it pertains to the judgment regarding the match between the methods and questions, selection of subjects, measurement of outcomes, and protection

Figure 2. Most respondents were born and reside in the South, but were educated in the North

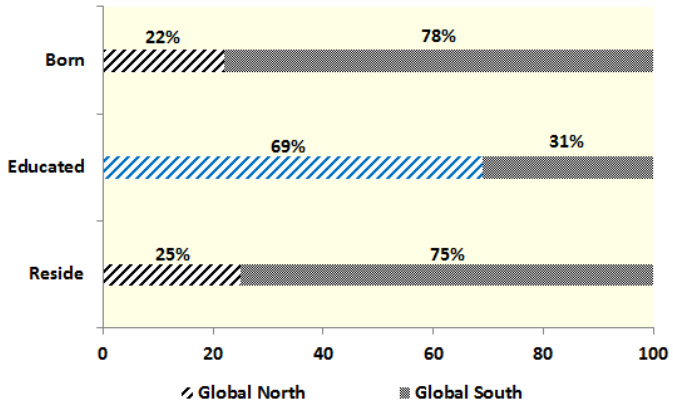
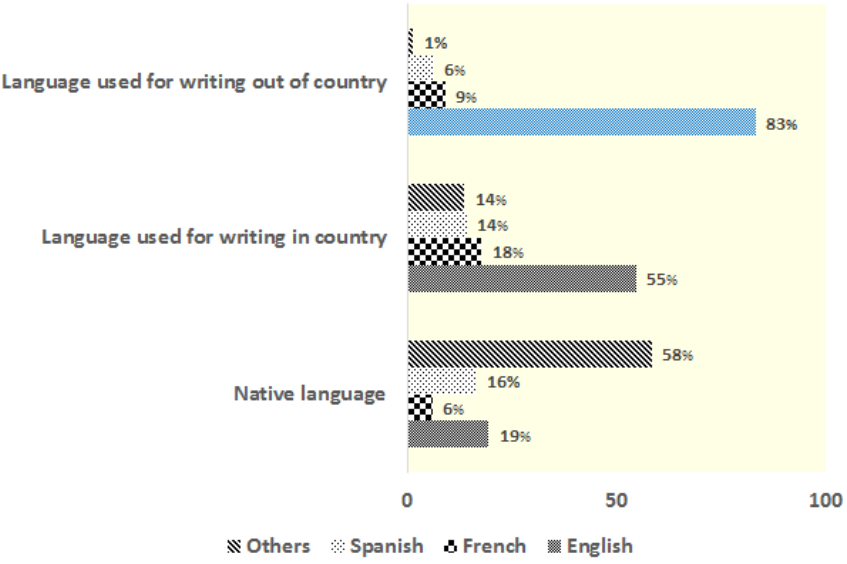


Figure 3. Most Southern researchers report research findings outside their countries in English



against systematic bias, non-systematic bias, and inferential error."[7] On the other hand, other researchers[8] argue that factors such as the extent to which research addresses the needs of key stakeholders, the involvement of users in the design and conduct of research, and the quality of reporting have a direct correlation with research quality. Still others[9] propose that research impact (albeit, not defined by them) is separate from quality and that both taken together comprise research excellence.

[7] National Center for the Dissemination of Disability Research. Focus. *A Technical Brief - What are the standards for quality research?* Brief Number 9. 2005.

[8] A. Boaz & D. Ashby. *Working Paper 11: Fit for purpose? Assessing research quality for evidence based policy and practice*. ESRC UK Centre for Evidence Based Policy and Practice. Queen Mary. University of London. 2003.

[9] J. Grant, P. Brutscher, S. Kirk, L. Butler & S. Wooding. *Capturing Research Impacts: A review of international practice.* RAND Corporation. Europe. 2010.

A major study of practical steps to enhance the impact of research on practice and policy[10] found that most literature addresses impacts on direct practice change and much less so on achieving effective conceptual impact. Mendez[11] highlights this debate between research quality and research excellence and notes that "the distinction between quality and excellence is not explicit or acknowledged in many papers reviewed." It is clear that views on research excellence demonstrate little consensus; for some it is quite narrow and bounded, while for others research excellence is wider and includes practice and policy effects.

This section compares the debates in the literature with the views of Southern researchers elicited by this study. The literature presented is intended to provide a setting with which to view the findings of the study. This section presents quantitative and qualitative data from the general survey. Quotations from respondents during key informant interviews or in response to the open-ended questions in both surveys are used to illustrate the points highlighted in the findings.

What are Southern notions about research excellence?

The Southern researchers interviewed were not particularly engaged in the research excellence debate. *Key informants exhibited a wide range of philosophies* in discussing the notion of research excellence as demonstrated by these remarks:

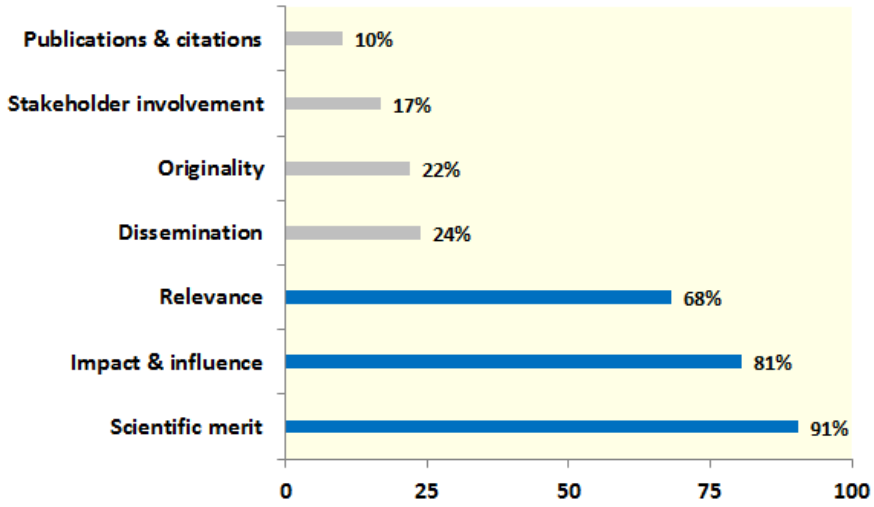
> "The first thing that should be taken into account is that there is no ideal notion of excellence . . . and therefore, from a development perspective, we need to respect and honor the plurality of ideas of excellence. . . . "
>
> "Excellence as a uni-dimensional quality is a useless idea for evaluation. What we need is criteria that incorporate a variety of dimensions of how research can be useful . . . one dimension can be contribution to knowledge, another dimension may be used by colleagues, [and] another dimension may be used by other types of societal actors . . . ."

In response to an open-ended question in the general survey asking "Please define 'research excellence' in your own words," content analysis of answers from 160 respondents fell into the following broad categories: scientific merit (145); influence and impact (129); relevance (109); dissemination (38); originality (35); stakeholder involvement (27); and publication and citation (16). For example, a response stating "clear research question or rigourous analysis" was classified as scientific merit, responses such as "contribute to discourse, impact, and knowledge translation" were classified as influ-

[10] S. Nutley, J.P. Smith & W. Solesbury. *Models of research impact: A cross-sector review of literature and practice*. Learning and Skills Research Centre. 2003.

[11] E. Mendez. *What's in Good?* Evaluation Unit: International Development Research Centre, Ottawa, Canada. 2012. This paper is part of the set of studies on this Strategic Evaluation.

Figure 4. How respondents 'defined' research excellence



ence and impact, and responses such as "new and original knowledge and original approach" were put into the originality category. The aggregation of responses indicates a concern with rigour of research processes, together with an interest in ideas about the dissemination, influence, and impact of the research findings that went beyond publication and citations.

Respondents argued that *frameworks for evaluation of use-inspired research must acknowledge the wide range of issues addressed by such research and the sometimes-emergent nature of methodologies applied*.

> "I think it is feasible and desirable to have standardized frameworks, as long as they are kept broad and include things like relevance and uptake of research results and are not reduced to number games."
>
> "If we are thinking of research for development; the right question is the one we address to solve a problem or to change public policies. So I would say it comes down to a right question, but the right question should be addressed with a right methodology."

Descriptions of research excellence provided by respondents referred to different units of account; some referred to research excellence of a research project, some to the excellence of researchers, and some others to the excellence of research portfolios.

What are Southern researchers' views on impact?

A major discussion in the literature relates to the issue of research impact. Key areas of concern are the definition of impact, how it should be measured, and whether it should be included as a characteristic of research excellence.[12] Several frameworks under development or in early implementation today in

[12] E. Mendez. *What's in Good?* Evaluation Unit: International Development Research Centre, Ottawa, Canada. 2012.

Europe, Australia, and the United States of America consider impact to be central to the notion of research excellence.[13] The **S**ocial **I**mpact **A**ssessment **M**ethods for research and funding instruments through the study of **P**roductive **I**nteractions (SIAMPI) report,[14] which focuses on social impacts, also speaks of attending to 'intermediary endpoints' that could provide an indication of expected impact.

Southern researchers considered impact to be an important component of the notion of research excellence. Although respondents did not provide any clear definitions of impact, *they stressed the need to ensure that all the possible kinds of influence that research might have on practice or policy be taken into account in a discussion of research excellence,* suggesting that for Southern grantees, impact is significantly linked to extra-academic effects.

> "More robust mechanisms for peer review should be developed; impact on the field of research must be prioritized; public impact should be considered widely rather than being restricted to policy influence."
>
> "But if they are not relevant for policymaking or to change community practices, I would think that they are not providing what a society expects from this type of projects. Because . . . in operational research proposals of this type (eco-health), one of the most important outcomes is to actually change realities to make it for the better. . . . So if they do not deliver in this sense, I would say that then something is missing."

What do routine evaluations address?

The general survey asked respondents to identify if routine evaluation of research excellence took place in their institutions and, if so, all the aspects of the research process that were emphasized during routine assessments. Respondents were provided with a list of aspects and the option to specify additional aspects if they wished. *Over 90% of respondents to the general survey reported that evaluations of the research process are routinely being carried out.*

Respondents identified research outputs, the research question, and research design as being the most common aspects addressed in routine evaluations by Southern organizations. Private sector organizations were more likely than other organizations to address the widest range of aspects. Routine evaluations of research excellence in organizations based in the North or the South emphasized similar aspects. In about 11% of cases, they listed aspects that went beyond the list provided, such as: influence and impact; relevance; dissemination; and involvement of the community.

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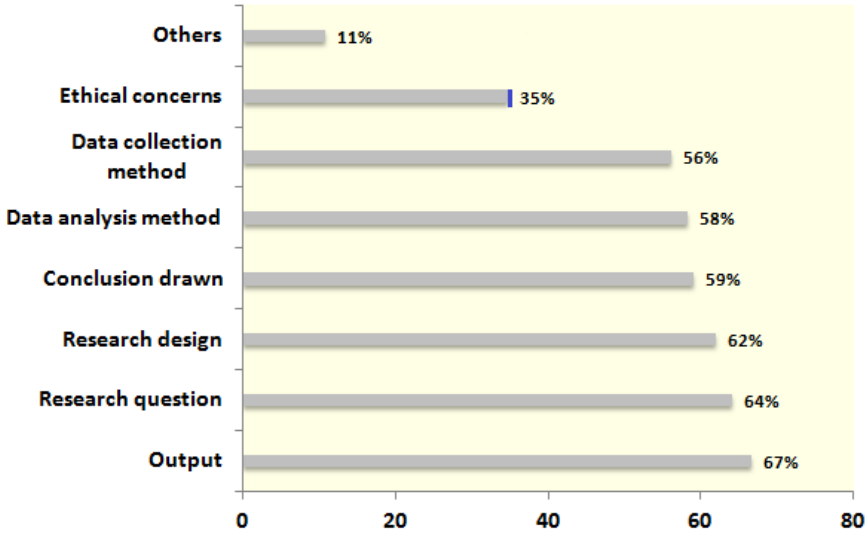
[13] These include the Australian Research Quality and Accessibility Framework (RQF), the UK RAND/Arthritis Research Campaign Impact Scoring System (RAISS), the Research Excellence Framework (REF), the US Program Assessment Rating Tool (PART), and the Dutch Evaluating Research in Context (ERiC).

[14] SIAMPI. *Final report on social impacts of research.* Social Impact Assessment Methods for research and funding instruments through the study of Productive Interactions between science and society. 2011.

Figure 5. Aspects of research excellence that were emphasized by routine evaluations



Organizations undertake evaluation in different ways; some use internal evaluators drawn from within the institution, others use external evaluators.[15] Among the organizations where research is routinely evaluated, 69% carried out evaluation using both internal and external reviewers. *Respondents reported that internal evaluations were more likely to focus on research design and outputs, while external evaluations focused on the research question and research design*. It may be noted that only 6% of respondents reported that routine evaluations of research excellence did not take place in their organizations. *Survey respondents based in the North were twice as likely to report internal mechanisms in place for the evaluation of research excellence as those based in the South.* About twice as many respondents based in the North (67%) reported that all of their research had been evaluated as compared with Southern-based researchers (33%).

> "Since most of my research is interdisciplinary, I hope that the evaluators have a broad disciplinary background; have experience in the topic of my research; and have a good understanding of the context where my research is conducted."
>
> "The people most qualified to evaluate the kind of research I am involved in are people who (a) conducted and successfully published in peer review publications in the same discipline, and (b) are familiar with the methods used in my research."

When asked to comment on who ought to be involved in the evaluation of research excellence, the 177 responses from the general survey fell under three categories: experts (126) comprising economists (16), public health experts (32), academicians (33), and researchers (45); community stakeholders (38)

[15] Respondents were asked if their organization usually conducts evaluations of research excellence by people within the organization (internal reviewers) or people from outside the organization (external reviewers).

comprising of peers (22) and community representatives (16); and policy makers (13). Respondents also referred to multidisciplinary teams and international panels. Some respondents indicated that the primary responsibility for evaluation rests with funders of research, research users, decision makers, and those who facilitate the process externally.[16]

Key informants stressed the importance of reflection on research excellence throughout the research process. They voiced the need to go beyond evaluating the research process in itself by including aspects of use and user involvement, which have important implications for broadening indicators of quality beyond publication and citation counts.

> "What I have seen is that people are paying lot of attention to the design, the studies, the methods chosen and how they get analyzed . . . there is lots of people who are really not just assuming that research is being done but are really struggling to question productively, how good . . . how appropriate the design is for the question that is being asked . . . ."
>
> "I think that in the whole process of research and its evaluation, appropriate methodology at all steps to define the research question needs to be clear from the very beginning. Not only in the design of the research and writing the protocol, but also in the process of collecting the data, analyzing data and even in writing the publication. So in every single step of the research process, quality of the research must be looked at . . . . Not only the scientific publication, but also how stakeholders can use research results by other means different from scientific publication."

What parameters and indicators should be used to evaluate research excellence?

There was wide agreement on the need to evaluate research excellence. Respondents pointed out that without evaluation, poor quality research would lead to unreliable data, misleading conclusions, and incorrect approaches to critical policy formulation.

> "Evaluating research excellence is vitally important in both academic and non-academic spheres. It is a simple fact that not all research is of the same quality. Without rigourous examination of research quality, a false equivalence is made between all research endeavors, leading to a poor understanding of the phenomena involved. When it comes to evidence-based policy making or decision making, the inability to distinguish between good and bad research can lead to counter-productive policies and ineffective solutions."
>
> "[Evaluating research excellence] promotes researcher accountability; promotes usable research outputs; promotes the purpose for which [it is] intended."

[16] Innovators Survey.

The study asked respondents to identify the parameters of research excellence that they feel ought to be used to in the evaluation of research excellence.[17] The following top results emerged from the 619 responses to this question: scientific merit (255); influence and impact (203); relevance (97); innovativeness (35); stakeholder involvement (16); and ethics (13). Relevance, influence, and impact are clearly as important in research for development as the more common measure of scientific merit.

Respondents also answered a question designed to elicit indicators: "For each parameter, please think of at least one 'indicator' that could be used to measure the parameter."[18] Of a total of 337 indicators suggested, most were related to traditional notions of scientific merit, like rigour (59), and use proxy indicators such as bibliometric and citation counts (136). Others were related to changes at the policy and community levels (58) and relevance of topic (10). Still others referred to the use of innovative design or methods (30) and capacities built (9).

The respondents suggested indicators that provided a contrast to the parameters they identified. While they mentioned relevance and changes at the policy and community levels, researchers referred to mainstream metrics such as bibliometric and citation counts, not known to be reflective of these parameters, to judge the excellence of research studies. This observation will be referred to later in this report.

When asked to identify what changes they would like to see in the way in which research excellence is presently assessed, general survey respondents provided a mixed bag of parameters and methods. Although neither comprehensive nor internally coherent, respondents provided a range of changes that they would value:

- political and equity relevance
- innovativeness and originality (rather than funders' priorities)
- post-project views of partner organizations to be taken into account
- track record of researchers as a marker of excellence
- evaluation to provide helpful and pragmatic comments regarding products
- field activities to be taken into account
- transfer of skills for evaluation of research excellence
- funders' participation in assessments should be encouraged

Respondents to the innovators survey suggested a range of quantitative (i.e., metric-based systems such as bibliometric and citation counts, scorecards) and qualitative methods (i.e., case studies, expert

[17] The survey asked: "Frameworks for evaluating research quality / excellence rely on a defined, specific set of parameters. For example: Number of publications, Stakeholder involvement, Clarity of Research question, Translation to policy, etc. We're interested in your views on what parameters should be used in evaluations of the kind of research that you do."

[18] The survey provided the following example: "For example, if 'Impact on Academic Discourse' is listed as a parameter, then perhaps 'number or times research is cited in academic literature' could be used as an indicator."

reviews, consensus) that could be used to evaluate research excellence depending on the purpose of the evaluation. Respondents noted that all of these offer promise in some terms while suffering from various drawbacks. *Southern researchers demonstrated a range of thinking on the issue of research excellence[19] and the methods and proxies that might be adopted to address it*.

> "Social media has the potential to act as a proxy for community assessment that can address some of these issues, but is restricted to specific research areas where there is a social media community. It remains subject to a range of biases and lack of knowledge of how these proxies behave."
>
> "An understanding of an approach designed to deal specifically with complexity, learning and reflexivity in projects is needed. Developmental evaluation is a start."

What parameters did researchers feel that their funders and users prioritized?

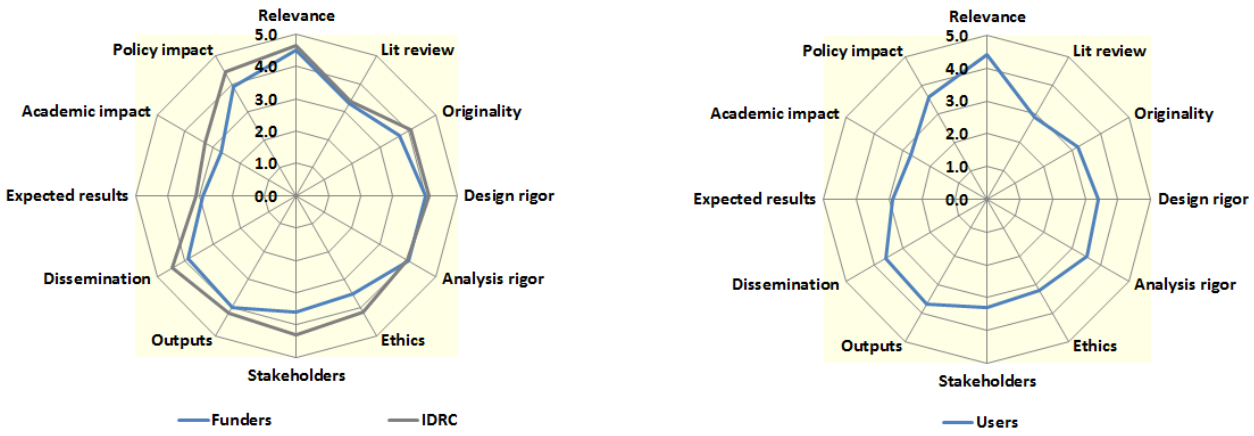
The general survey asked respondents to identify the two largest funders of their research work and the two main users of their research findings. The categories that funders and users fall into overlap somewhat; some kinds of funders could also be users of research findings in other situations. This study was interested in the parameters of research excellence that the respondents felt their funders and users valued. This was explored on the basis of a pre-determined list to which respondents could provide additional options. Table 1 in Annex 2 shows the results.

About one-third of the respondents named IDRC as one of their largest funders. Other major funders were the private sector (24%), government (13%), research institutions (12%), and multilateral organizations (9%); the rest were bilateral organizations, research councils, and national non-governmental organizations. *Researchers identified relevance as the parameter funders emphasize the most.* Other parameters were rigour of design, methods of analysis, outputs, dissemination, policy impact, originality, stakeholder involvement, and ethics. Academic impact was ranked the lowest. Ranking for ethics was higher in the case of IDRC as compared to any other funder.

Respondents thought research councils and research institutions rank originality higher than academic impact. They said non-governmental organizations emphasize policy impact, relevance, and involvement of stakeholders, while governments emphasize relevance, rigour of design, dissemination, and outputs. Yet, as one respondent pointed out, peer review often focuses on academic concerns.

[19] Innovators Survey.

Figure 6. Researchers' perception of parameters of research excellence valued by their funders and users



> "Ideas of excellence are very often dominated by specific ways in which academic disciplines think of good research, and academic ideas of good research are dominated by norms; the sort of scientific norms that need not necessarily be shared by the funders."
>
> "But going back to the question of excellence, I would say it is still very much in the making. And in my appreciation, [where] I have been chair of some of these peer review processes, they are very much inclined to be dominated by the academic discourse."

Respondents identified users as being the government (42%), academic institutions (23%) research institutions (12%), civil society (12%), and development agencies (11%). *Respondents felt that users valued the relevance of the research question above all.* Outputs, rigour of data analysis, and dissemination were other highly-ranked parameters. Respondents said that users were least likely to be engaged on literature review, academic impact, and expected results, despite about one-fourth of users being academic institutions. In addition, it is evident that the government (as a user) emphasized policy impact and dissemination, academic institutions were most interested in outputs, and civil society organizations most emphasized stakeholder involvement in the research study. (See Table 1 in Annex 2.)

Section 3. Implications for an IDRC framework

The multidisciplinary nature of the research grants, the lively debates about the definition of research excellence, and the lack of consensus on appropriate indicators create challenges for the construction of a framework to assess the excellence of IDRC-supported research. The issues and trends examined in the previous sections underscore this reality.

Several commentators have sought to define the broad characteristics of evaluation of research for development. A useful set, which sets out minimum standards, is as follows:[20]

• it must prompt both first order learning based on the evaluation question, but also second order learning by supporting reflection, debate, and iteration between goals and methods;

• it must break down the duality of the evaluation and that being evaluated, engendering discussion about choice of indicators and the process of evaluation;

• it must acknowledge the variety of research programs, ways of knowing, and products of knowledge;

• it must give due recognition to stakeholders' knowledge; and

• it must recognize that processes undertaken for mediating with the environment are an important aspect of a research program.

This section draws on the findings of the surveys and the interviews to derive implications for IDRC in its thinking about a research excellence framework. Each subsection discusses an important concept raised by the study findings. The section draws learning by juxtaposing referenced literature and Southern researchers' views on research excellence.

The main concepts discussed below are: the debate on definitions of research quality and research excellence; the pertinence of relevance and impact to conceptualizations of research excellence; less universally accepted parameters such as innovation; views on ethics and metrics; and the need for cross-disciplinary frameworks and flexibility in evaluation.

Research quality or research excellence

For some researchers, research quality and research excellence are fundamentally different; the study findings reiterated this. Respondents showed equal attention to the need to focus on research process issues and on political ones[21] in assessments of research excellence in their Southern use-inspired research contexts. *Some argued that research quality is an epistemological issue, while research excellence incorporates analysis that presents meaningful results and introduces new data and findings to a policy discourse.*

> "Multidisciplinary research . . . tackles complex social problems [and] extends the frontiers of understanding on how to act on problems, while building conceptual and methodological foundations of the field."

[20] J. Spaapen, H. Dijstelbloem & F. Wamelink. *Evaluating Research in Context: A method for comprehensive assessment-Second Edition*. Consultative Committee of Sector Councils for Research and Development, Netherlands. 2007.

[21] Used here to mean: describing the power dynamics of the relationship between those who are the subjects of the study and the wider context in which those stakeholders live. This power dynamic is an important determinant of research use, and has ramifications for the construction of frameworks which are discussed further in section 4.

Respondents felt that research should not only provide credible findings that are viewed as valid and fair, but also results that have application to practice and/or policy in the complexity of the real world. This debate has important implications for how IDRC might describe and populate its framework.

Relevance

The idea of relevance emerged as an important marker of research excellence. *Most calls for increasing the relevance of research were related to its relevance to clearly discernible development needs within the researchers' particular contexts.* Relevance appeared 109 times in 160 responses to a survey question asking respondents to define research excellence in their own words, indicating the importance assigned to it by the respondents.[22] They listed relevance as the most important aspect of research excellence, and reported that their funders and users placed the greatest value on the relevance of their research work.

Several respondents noted that research needs to be rooted in the expressed needs of communities; others felt that once an issue was identified, it was incumbent upon the researchers to ensure that the question adequately frames the issues faced by communities whose lives are sought to be changed. The following remarks highlight these ideas:

> "And it should be looked at who the question was defined by . . . not only by the researchers, but by the stakeholders or communities, or even by the decision makers, because there is a difference in the perspectives between decision makers and communities and communities and researchers that see different things."
>
> "The focus in western academic journals tends to be on methods. There is a lot less attention paid to the usefulness or relevance of the research question from a developing country perspective and much more attention paid to any 'in-vogue' methods or quantitative methods. The quality of research should hinge much more on the topical relevance of the research being undertaken."

It is clear that Southern researchers feel strongly about the need for the research to be relevant to topical concerns, to users of the research, and to the communities where change is being sought. It is also clear that calls to understand emergent methodologies are rooted in the recognition of the difficulties faced by researchers working in the global South. All in all, key informants felt that relevance was an issue that required attention in frameworks that attempted to evaluate the excellence of the research and must form an important parameter of assessment.

[22] General survey; Innovators survey; key informant interviews

Impact

Impact—its definition and measurement—is a hotly contested issue in both the literature reviewed and the findings of this study. Several characteristics make tracking of influence and impact difficult:[23]

• poor personalized interactions of those working in basic research, emerging fields, and highly-individualized fields with the relevant stakeholders;

• length of trajectory from research to application;

• quality of interactions fostered by a field of work and the power dynamics between the relevant stakeholders;

• cultural differences between countries in respect to interactions between researchers and industry or government;

• the motivation of individual researchers to achieve social impact; and

• the sense of urgency for productivity by various stakeholders.

Furlong & Oancea,[24] referring to Weiss's concept of 'knowledge creep,' highlight the length of time that impact can take when research work yields capstone findings that support a growing body of work. An Organization for Economic Co-operation and Development (OECD) report[25] makes the point that the primary result of research is the advancement of knowledge, which takes the form of publications for various audiences and second rank outputs that are directly complementary, such as patents, designs, and software. The same report argues that beyond these outputs lie outcomes, which can range from high-quality graduates, technological innovations, increased expertise of researchers and institutions for consulting, international links with other research organizations, industry, or governments, and contribution to culture.

Researchers made few practical suggestions for how to measure research impact. A key informant suggested that one approach might be to review proposals for their proposed methodology to create impact and review the output in that light. Some suggested that only plans for and execution of a knowledge translation strategy should be evaluated.

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[23] SIAMPI. *Final report on social impacts of research*. Social Impact Assessment Methods for research and funding instruments through the study of Productive Interactions between science and society. 2011.

[24] J. Furlong & A. Oancea. *Assessing Quality in Applied and Practice-based Educational Research: A Framework for Discussion*. Oxford University Department of Educational Studies. 2005.

[25] OECD. *The Evaluation of Scientific research: Selected Experiences*. Organization for Economic Co-operation and Development. Paris. 1997.

> "Some projects are actually developed to expand knowledge. To clarify proposals, to clarify ideas . . . to expand knowledge in general. And this is what is being expressed in a project . . . this means that this is the impact. But if you say, no, that we are making the research project because we want to change how things are being done, the impact should be viewed by what we are changing, what we are delivering that will help to induce the change for the better. So it means that this has to be spelled out right from the beginning in the proposal design."
>
> "Excellence of research needs to be evaluated differently for academic and policy research. Academic research needs to build on and contribute to theory. Policy research must focus on results that are policy relevant and thus does not emphasize theory but rather data that can be used to develop policies. . . . The two should never be confused and organizations funding research need to be absolutely clear whether they are looking for policy or for academic research."

over other stakeholders and their priorities, they cannot be responsible for the absorption of evidence into policy or for behavior change that is the hallmark of social change. *A framework to assess research excellence in IDRC-supported research might therefore try to gauge the extent to which researchers know their context and are able to translate that into knowledge translation strategies in the research proposal.* As an agency concerned with translating research findings into use for practice and/or policy, it may also be worthwhile to track knowledge communication and translation throughout the research process and its wider influence thereafter.

Innovation and capacity

Another important aspect that has been highlighted is that of innovation; some[26] refer to research evaluation as being part of a "broader process of innovation" marked by "an interactive and iterative pattern of mutual influencing between the different actors (stakeholders) in that innovative process."

> "Critical inquiry that is always open to falsifying its own hypothesis. Research that offers 'value-added,' something that has not been done before. Research that is always aware of and critical of its own assumptions . . . ."
>
> "To my mind, research quality is too heavily weighted in respect of publications in academic journals. These journals are good proxies of understanding technical instruments of a discipline but are not very suitable for new and feasible policy ideas."

[26] J. Spaapen, H. Dijstelbloem & F. Wamelink. *Evaluating Research in Context: A method for comprehensive assessment-Second Edition*. Consultative Committee of Sector Councils for Research and Development, Netherlands. 2007.

Survey and interview respondents exhibited strong support for originality and innovation. It appeared as an aspect of routine assessment of research excellence by organizations, as a parameter suggested by respondents, and as an aspect that researchers felt that funders and users of their work valued. Researchers also cited attention to originality as a change they would like to see in the assessment of research excellence.

There is not much mention of research capacity building in the literature on research excellence, yet it came up a few times in the course of the study. That it should come up in a study involving IDRC grantees is perhaps not surprising, given that capacity building forms a core value that IDRC supports through its various grants.[27] As such, it may be an important concept for IDRC to consider in a framework for assessing research excellence.

The accent on innovation may be of particular interest to IDRC given that IDRC's current Strategic Framework places knowledge and innovation at the core of the work that IDRC funds. How these are taken into account in IDRC's research excellence framework depend on whether IDRC considers these as parameters of research quality or of research excellence.

Ethics

A low representation of ethics as an aspect used to assess research excellence in routine evaluations came as a surprise given the settings in which the researchers work and the grounded nature of their work. Attention to the ethical conduct of research is an important part of training on research methods and is an integral component of most frameworks of methodological rigour. Interestingly, research design was more commonly included in routine evaluations of research excellence by South -based researchers (65% versus 54%); ethics was more emphasized by North-based researchers (50% versus 29%). Whether this is a reflection of the low value that those in the global South place on ethics, or that of a paucity of systems and resources, is a matter that IDRC may like to explore through other work.

One key informant took the concept of ethics further than traditional provisions of research practice, such as informed consent.

> "We have to encourage even more [of] this type of discussions to make sure that whatever is endorsed is not endorsed because of the internal value of the proposal, but also the ethical value for society."

Researchers perceive that the value IDRC puts on ethics was higher compared to any other funder. This was especially interesting given that respondents reported that ethics was not emphasized in routine evaluations of research. IDRC has strongly held values on research ethics as prescribed by its

[27] P. Patrizi & M.Q. Patton. *Learning from Doing: Reflections on IDRC's Strategy in Action*. International Development Research Centre, Ottawa, Canada. 2009.

Advisory Committee on Research Ethics (ACRE). The following principles are integral to an understanding of research excellence in IDRC:

• Respect for persons, animals, and the environment. In the case of human participants in research, the autonomy of the individual must be respected.

• Concern for the welfare of participants, including beneficence and non-maleficence.

• Justice; the obligation to treat people fairly, equitably, and with dignity.

The organization requires that IDRC-supported research adheres to universal concepts of justice and equity while remaining sensitive to the cultural norms and practices of the location of the research.[28] *Thus, any framework that assesses the excellence of IDRC-funded research would necessarily review the ethical aspects of the research conducted, using the principles outlined above to draw its conclusions.*

Incentive structure in various fields

In reporting their perceptions of what they think users of their work value, respondents noted that governments, as users, value policy impact (4.5) above academic impact (2.1), whereas academics ranked academic impact higher than policy impact (4.0 versus 3.0). Respondents felt that development agencies, research institutions, and civil society placed the highest value on relevance. Refer to the table in Annex 2 for details.

It is clear that the definition of research excellence and the parameters used to measure it vary with the mandate of the institution and the purpose of the evaluative process itself. This is linked to calls for research with policy or practice at its heart to be judged differently from research for academic outputs.

> "There are essentially no widely used proxies that effectively measure the impact of research outside of its re-use by other publicly funded researchers."
>
> "I would like evaluators to use different criteria in the evaluation of academic and policy writing. Criticizing a policy paper for not containing a review of literature makes no more sense than berating an academic article for not making detailed policy recommendations."

IDRC will need to consider whether it wishes to bolster existing institutional incentives or attempt to change them through its research excellence framework. This is a policy position that will need to be determined prior to construction of a framework.

[28] C. Duggan. Personal Communication. *Terms of Reference for the IDRC Advisory Committee on Research Ethics (ACRE).* 2013.

Metrics

Donovan[29] posits that "Although desirable, the search for novel quantitative metrics is a palliative for the deficiencies of an outmoded STI (science, technology, and innovation) policy framework." She goes on to discuss that although publication counts and citation counts may be excellent measures of productivity, or have an impact on subsequent academic publications, these measures do not capture the quality of the papers. As Donovan[30] also points out, there is a danger that qualitative social science research that is not included in citation indicators may be viewed as soft and a lesser order of knowledge. She warns against the creation of an imagined hierarchy of science, which can become the tautological basis upon which funds will be distributed. An OECD report[31] supports the notion that quality is so complex that only informed peers can express a judgment of fundamental research, and that bibliometric and peer review approaches used together can make the concept visible.

Donovan[32] has discussed the difficulties that non-English writers have in being represented in bibliometric counts. She reports that standard citation counts such as Thomson Scientific have a relatively low representation of regional journals, small research fields, and non-English papers. About 60% of respondents to the general survey had native languages other than English, French, and Spanish. Yet 85% wrote in these languages when reporting within their own country and 99% when reporting outside it. Does this have a bearing on their ability to report, and do their language skills affect their abilities to influence practice and/or policy? Our respondents noted:

> "Current academic definitions of excellence used in research quality assessment are heavily biased towards established researchers, and to researchers publishing in English."

When asked to identify the indicators by which their research should be evaluated, respondents to the general survey chose bibliometric and citation counts. This despite the fact that the same respondents had listed relevance, influence, and impact most often in the list of parameters of research excellence that they thought should be used. *Clearly, despite widely held views on limitations of bibliometric methods to assess research excellence, respondents simply fell back on these as currently-used indicators of excellent research.* Some key informants suggest that this may be because of the value attached to publications in the academic world, while others cited the difficulty of constructing objective and easy-to-apply indicators that can be used to assess impact.

[29] C. Donovan. *The qualitative future of research Evaluation.* Science and Public Policy, 34(8). 2007.
[30] C. Donovan. *The qualitative future of research Evaluation.* Science and Public Policy, 34(8). 2007.
[31] OECD. *The Evaluation of Scientific research: Selected Experiences.* Organization for Economic Co-operation and Development. Paris. 1997.
[32] C. Donovan. *The qualitative future of research Evaluation.* Science and Public Policy, 34(8). 2007.

Cross-disciplinary frameworks

The OECD report referred to above[33] also points out the difficulties of evaluating multidisciplinary work and emerging disciplines by using both bibliometric counts and peer-based methodologies. Neglect of grey literature in favour of codified production of literature in scholarly journals has been a drawback of traditional research evaluation. *The report notes that grey literature is often of cardinal importance in interdisciplinary work and for innovative developments.*

This is of particular concern given that about 95% of the respondents are engaged in multidisciplinary research.[34] Several commentators and researchers have spoken of these difficulties in the light of preference for methodology and stance in respect of positivist or constructivist paradigms that mark the evaluation of research excellence in different disciplines. However, Boaz & Ashby[35] argue that parameters used for quantitative methods can be mapped to those used for qualitative ones.

Respondents remarked on several difficulties in this regard.

> "So it is not just a South-South type of operation, but sometimes it is North-South or South-North type of operation. And these things have to be much better understood because we often use models for assessing research by using the American system, the British system, the Australian, you name it. But these are usually organized frameworks for their political, academic, economic, and social topics, and these do not apply in the South."
>
> "Research excellence encompasses both the content and form of research. By content, I mean that research tackles the questions that add to our knowledge and moves society forward (including intellectually). By form, I mean that research is well designed and well executed, within the norms of the various disciplines involved."

Mansilla, Feller, and Gardner[36] note that, especially with respect to interdisciplinary research, assessment requires an "enculturation process" which will allow those of one discipline to regard interdisciplinary work "as natural and not unnatural." This was echoed by some respondents.

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[33] OECD. *The Evaluation of Scientific research: Selected Experiences*. Organization for Economic Co-operation and Development. Paris. 1997.

[34] Remember that the survey instrument did not distinguish between multi-/inter-/trans-disciplinary work.

[35] A. Boaz & D. Ashby. *Working Paper 11: Fit for purpose? Assessing research quality for evidence based policy and practice*. ESRC UK Centre for Evidence Based Policy and Practice. Queen Mary. University of London. 2003.

[36] V.B. Mansilla, I. Feller & H. Gardner. *Conference Report: Quality assessment in interdisciplinary research and education*. Research Evaluation, Vol. 15, Number. 1. England. 2006.

> "As an interdisciplinary researcher, I sometimes run into the problem—my work is judged by those of a certain discipline and it doesn't fit their norms."
>
> "[What is needed is a] shift in emphasis from a positivist understanding of knowledge in my field (health) to a more social constructivist one."

The implication for an IDRC framework is thus two-fold. *First, it must find a way to account for and recognize the influence that grey literature might wield; second, it must allocate value to new methodologies and evolve common standards for newer disciplines and multidisciplinary modalities that use qualitative methodologies*.

Flexibility in evaluation

Researchers called for open and flexible evaluation. Some commentators have also highlighted the issue of addressing latent research problems. Research in dynamic settings (as opposed to controlled settings), which is often the hallmark of the environment of use-inspired research in the global South, may result in drift from pre-planned research. *While excellence can be seen as research that is 'publication ready,' respondents also reported that research is excellent when it 'addresses relevant, complex social questions in ways that results in usable evidence for policy and practice.'* Evaluative frameworks must be sufficiently open to account for these contrasting realities.

> "I feel it necessary that the key criteria of excellence must be learning and change. If we do not know what we have learned and to what change we are contributing, we will not be able to use the results of the evaluations for future research."
>
> "Standardized frameworks tend to reduce assessment to a mechanistic exercise. A 'general' approach is more appropriate, but requires a higher level of training and capability of those involved."

In order to take this concern on board, it will become necessary for the IDRC framework to be sufficiently flexible to account for the challenging environments and evolving situations that researchers face when tackling issues of the real world.

Section 4. Construction of a framework

This study does not by itself provide enough information to develop a framework for assessment of research excellence, but it does provide a rich trove of data from which to derive several important lessons. Southern researchers are IDRC's partners in using research to accelerate development. Their voices keep IDRC grounded in the realities of research for development.

IDRC has a series of geographically-dispersed, innovative, locally-relevant programs designed to yield practice and/or policy outcomes, operating on numerous, non-synchronized timelines. This

poses a particular *problématique* which will require both a framework response as well as a structural or institutional response.

The framework response will need to capture attributes of excellence consonant with the ideals that IDRC would like to nurture. The framework will help emphasize the values that IDRC champions by directing funding to research that conforms to these values. This will also encourage grantees to apply these values to other research work they undertake.

The framework will also require a structural response. This means that the system through which the framework is applied will have to work across diverse geographies and projects in diverse and multiple disciplines that are attempting to develop multiple forms of influence and impact. In addition, the system must have the capability to aggregate results to meet institutional reporting needs.

Implications for framework construction

Mateu et al. describe three primary purposes with which research excellence frameworks have been constructed: allocation of public funds to universities' and research centers' research; evaluation of research impacts in different contexts; and making comparisons across different research organizations. The frameworks are predominately used to evaluate the processes of conducting research and the products of research. Frameworks could be employed by those who use them to guide the excellence of their work (e.g., the private sector, research councils and institutions, and government departments), by scholars and researchers, and by those who use the results of research (e.g., policy makers, research managers, civil society, and researchers).[37]

> "The assessment is most useful when it informs the researchers who have been assessed about how the organization values the outcomes, because there is learning process . . . ."
>
> "I worry that if you don't plan for this (influence and impact), that this is where it is going to be plugged into a practice or policy space, really bring actors prospectively in along the way, I don't think that it's going to happen . . . . In my view, we have not engineered incentives in the way we need to."

The RAND Europe report on "Capturing Research Impacts: A review of international practice"[38] reports that common methodologies are portfolio analysis, peer review, benchmarking, bibliometric

[37] P.F. Mateu, K.A. Hobson, C.L.S. Coryn & D.C. Schröter. *Key Issues and Trends in Evaluating Research Excellence in Applied Development Contexts: A Review and Synthesis of the Serial and Grey Literature.* The Evaluation Center, Western Michigan University, Kalamazoo, Michigan. 2012.

[38] J. Grant, P. Brutscher, S. Kirk, L. Butler & S. Wooding. *Capturing Research Impacts: A review of international practice*. RAND Corporation. Europe. 2010.

questionnaires, case studies, logic modeling, interviews, cost-benefit analysis, micro/macro-economic modeling, and self-assessment surveys. Most of the frameworks listed assess the wider impact of the research, although a few do not. The Research Excellence Framework,[39] the new system for assessing the quality of research in higher education institutions in the United Kingdom, identifies three generic criteria that can be applied across all disciplines: outputs in terms of their originality, significance and rigour; impact in respect of reach and significance; and environment with regard to its vitality and sustainability. It suggests the following weighting for each as being 65%; 20%; and 15% respectively. The RAND-Arthritis Research Council research excellence tool is a self-administered questionnaire of 187 yes/no questions that is sent to principal investigators of biomedical grants funded by the Council six months after the completion of the grant. A useful publication by RAND Europe provides a detailed description of these frameworks.[40]

A respondent described the process adopted to assess research excellence by her organization as follows:

> "We have broken down the research cycle into three parts: contextualization stage, data collection stage and the communication stage. So the monitoring system is structured as a series of small reflections."

Framework choices about the 'unit of account' of assessment (e.g., research output, project, program, etc.) is linked to this question as choices made will permit comparisons at one level but not another. According to an OECD report,[41] evaluation can focus on entities at varying levels; however, whatever the complexity and character of that entity, research evaluation begins with the work of an individual researcher.

Suggestions for the construction of an IDRC framework to assess research excellence are presented below.

A. ***Use-inspired research of the kind that IDRC funds is, by definition, concerned with applicability to local realities and is expected to have consequences on social and political realities.***

Southern researchers emphasized relevance and stakeholder involvement. Relevance appeared in self-generated definitions of research excellence of researchers and was among the aspects that they felt ought to be assessed in routine evaluations. This was reflected in their perceptions of what their funders and users valued and, indeed, in what they perceived IDRC to value highly. It is also

[39] *Assessment framework & guidance on submissions*. 2014 - Research Excellence Framework. 2011.

[40] J. Grant, P. Brutscher, S. Kirk, L. Butler & S. Wooding. *Capturing Research Impacts: A review of international practice*. RAND Corporation. Europe. 2010. Appendix A of this report provides a very useful summary of the main frameworks in terms of where used, whether they assess wider impacts, main methodologies, brief description, and issues with them.

[41] OECD. *The Evaluation of Scientific research: Selected Experiences*. Organization for Economic Co-operation and Development. Paris. 1997.

reflected in statements that support the community's role in defining the research questions. In fact, one respondent even suggested that a definition of ethics should properly contain reference to the relevance of the research to compelling development problems of that context. Principles prescribed by IDRC's ACRE[42] support these concepts. These ideas should find a place in IDRC's framework for assessing research excellence.

Southern researchers were unanimous in their view that rigour and scientific merit are valid parameters with which to assess the excellence of research. Respondents emphasized scientific merit in responses to both an open-ended question to define research excellence and a question on which parameters should be used to measure it. Southern researchers see themselves as contributing to a body of learning that is rooted in good research practice and reliable, and thus valuable.

There was strong and widespread support by Southern researchers for attention to influence and impact in frameworks for research excellence. Researchers also pointed out that impact takes place at various levels and through various interlocutors. It may also vary by the researcher's field and the nature of interactions between researchers and stakeholders, among other determinants.[43] Respondents acknowledged that, as the literature shows, gathering evidence of impact is difficult; yet Southern researchers argued that frameworks for research excellence could take account of intended plans for influence and impact.

The framework may need to recognize the length of time that impact can take to manifest. The impact may be broken up into more proximate outputs for advancement of knowledge such as reports, papers, and designs, and the distal outcomes that could range from improved capabilities to carry out high quality research, establishment of new organizational linkages, and contribution to culture.[44]

Southern researchers stressed a number of aspects such as innovation and research capacity building that are central to the way that IDRC works. Respondents emphasized the need to build research capacity in Southern contexts. They pointed out that innovation in research design is often required due to the nature of questions being investigated and the dynamic nature of the settings in which the research takes place.

B. ***A framework that addresses research excellence, not only research quality, is needed.***

The analysis of the study findings and relevant literature suggests that the debate over research excellence and research quality is influenced by the perspective being used; namely, is it methodological or political? Both perspectives can be considered to be legitimate in the contexts in which IDRC grantees work. This is

[42] C. Duggan. Personal Communication. *Terms of Reference for the IDRC Advisory Committee on Research Ethics (ACRE).* 2013.

[43] SIAMPI. *Final report on social impacts of research*. Social Impact Assessment Methods for research and funding instruments through the study of Productive Interactions between science and society. 2011.

[44] OECD. *The Evaluation of Scientific research: Selected Experiences*. Organization for Economic Co-operation and Development. Paris. 1997.

Figure 7. Research excellence encompasses research quality

depicted in Figure 7, describing how the concept of research excellence encompasses the concept of research quality.

Thus, at one level, research quality/excellence is a matter of process—of seeing that scientific merit is not compromised and that the research and the researchers interact with and are seen as credible by the larger community of researchers. At another level, and related to the use-inspired nature of the work that IDRC funds, research quality/excellence is a political question that describes the power relationship between the research and the wider world: is the research relevant to an experienced reality, does it have an audience outside academia and does it reach this extra-academic audience, what is the scope of its influence, and finally, how do the results of the research affect the lived reality?

This means that the researchers must, in their project proposal, be able to identify interlocutors clearly, being explicit about the political role that each group can play in using the results of the research findings to influence the experienced reality that is sought to be changed.

Ideally, a framework will recognize the validity of documentation and dissemination of findings in non-English-language briefing and other materials. It must recognize non-academic forms of communicating results and their use in multiple ways to address practice and policy.

Owing to incentives for certain ways of reporting (e.g., peer-reviewed journal publications in university settings), researchers might themselves inadequately address influence and impact. *Contextually-effective ways of reporting could strengthen knowledge translation; these should be fully explored and supported through the use of appropriate parameters and indicators of research excellence.*

External assessment ensures that IDRC-funded work is verified by impartial observers to be of the excellence that IDRC aspires to support. Most respondents in our study fell back upon peer review as the methodology that they supported. Others mentioned bibliometrics and citation counts, while at the same time making a plea for greater attention to practice and policy impact.

C. ***The framework must address the scope and diversity of questions that IDRC-funded researchers tackle.***

IDRC funding supports a wide and diverse set of research projects across a variety of domain specializations. This poses particular challenges for research excellence evaluation. One challenge is the need to define parameters and indicators that best capture the perspective, context, and needs of the research done by IDRC's Southern grantees. There are several parameters of interest for which definitions and indicators are not yet available; yet, in the past, scientific merit and rigour have evolved into commonly understood values with definitions that span domains. Take, for example, the definition of ethical conduct of research. It is therefore hoped that attention to the development of such parameters will result in the emergence of definitions.

Much of IDRC-supported work is multi-, inter-, or transdisciplinary and is sometimes evolutionary. Research questions, design, and methods evolve as the situation unfolds and research projects absorb and respond to the challenges of the real world. The framework will require the flexibility to take note of the evolution of research questions in dynamic real world situations, and will need to build in a degree of reflexivity which allows for changes in design and timelines. This will have bearing on the choice of evaluation approach and methods (e.g. peer review, self-assessment, and survey methods) as well as the sensitivity of the evaluator(s) to the norms of disciplines that may not be their own.

D. ***The 'unit of account' of evaluation will have implications for framework construction.***

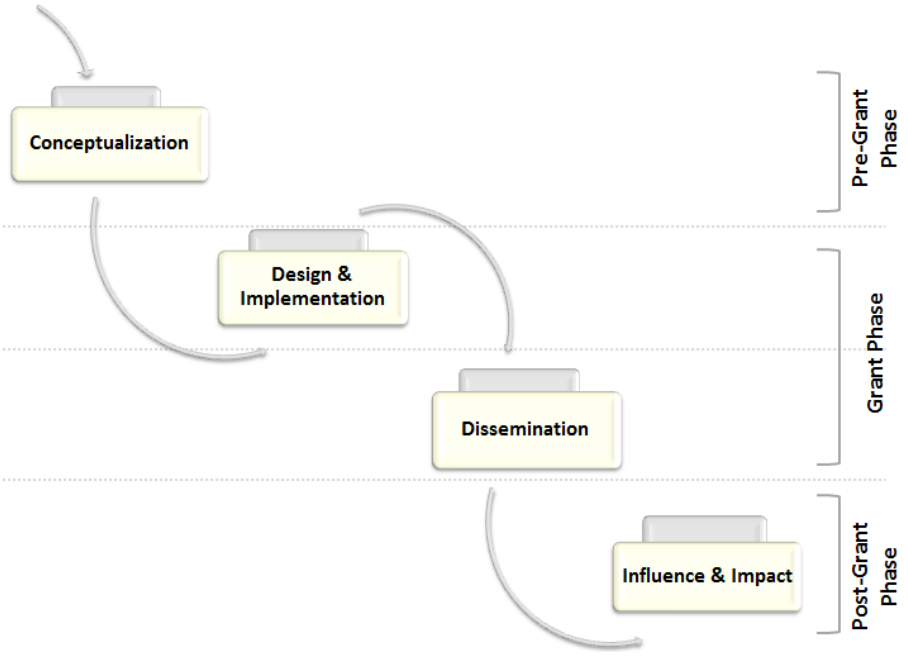
IDRC must define the level (e.g., research output, project, program, etc.) at which it is evaluating research excellence. Is the purpose to assess the quality of each research project; of each program; or at a higher organizational level? In the case of frameworks such as the United Kingdom's Research Excellence Framework,[45] the unit of account is the educational institution. These institutions are required to report on aggregated and summarized data. This means, of course, that reactions to the data can be made only at the level of the institution rather than at the level of departments, researchers, or other units. However, if data were to be collected from, say, research projects, it would be possible to aggregate all or part of the data to successively higher levels of accountability, such as programs in the case of IDRC.

E. ***The purpose of the evaluation will determine the phases of the research cycle at which it should be carried out.***

It may be worthwhile to unbundle the research process into its various parts, incorporating both the process and the ends to which it is supported. In this way, one might consider it as being composed of the following four steps: conceptualization, design and implementation, dissemination, and influence and impact.

[45] See also page 25 for a brief description.

Figure 8. Phasing of research excellence evaluation



The research cycle could be divided into phases that are of interest for evaluation. See figure 8 for an example. It suggests three phases at which evaluation could be used to meet different ends: the pre-grant phase could be used to assess the conceptualization of the grant, its relevance to local realities, and its consonance with IDRC's mandate; evaluation of the grant phase could yield information on the scientific merit of the research project, its rigour, and its embeddedness within the community; and the post-grant phase could yield information on the post-project influence and impact. Assessment of the pre-grant phase could be based on the research proposal, the grant phase on self-assessment and program staff reporting, and the post-grant phase on external peer review and partner reporting.

Each phase could assign weights to various parameters at different stages of the research cycle. These could vary depending on the phase during which the assessment is carried out. Thus, design, rigour, and reporting might be weighted in the grant phase, while influence and impact on practice and policy might be weighted in the post-grant phase.

The platform on which IDRC chooses to deploy its system for research evaluation will have to cope with the geographical spread and the multiplicity of timelines of its program portfolios. An important consideration for the framework is the practicality of carrying out assessments in the settings in which many of the projects take place. The extent to which IDRC can rely upon self-assessment, use web-enabled formats, or carry out on-site validation may well be determined by the costs of these formats. Each evaluation

modality has pros and cons in regards to what it is assessing—these will have to be considered carefully before IDRC completes a research excellence framework.

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Annex 2. Table 1. Researchers' perceptions of parameters prioritized by funders and users of their work (possible score = 0-5)

	Relevance	Lit review	Originality	Design rigour	Analysis rigour	Ethics	Stake-holders	Outputs	Dissemination	Expected results	Academic impact	Policy impact
Funders												
IDRC	4.7	3.4	4.1	4.1	4.0	4.2	4.3	4.2	4.5	3.1	3.3	4.4
Government	4.3	3.0	3.5	3.7	3.6	3.3	3.2	3.7	3.6	2.6	2.6	3.4
Research councils	4.0	4.1	4.4	4.8	4.1	3.6	2.7	4.5	3.7	3.0	3.7	3.0
Research institutions	4.5	3.7	4.4	4.5	4.5	3.6	2.8	4.2	3.7	2.6	3.7	3.7
Multilateral organizations	4.3	2.8	3.6	3.7	3.9	3.5	3.7	3.3	3.9	3.2	2.3	4.0
Bilateral organizations	5.0	2.9	3.1	3.4	3.9	3.9	4.3	4.1	3.8	1.8	1.8	4.0
Private sector	4.6	3.1	3.5	3.8	3.8	3.3	3.3	4.0	4.0	3.2	2.6	3.8
National NGO	4.6	3.4	3.0	3.6	4.0	3.0	4.6	4.0	4.2	3.4	2.0	4.6
Users												
Government	4.5	2.4	2.7	3.0	3.3	3.0	3.6	3.4	4.0	2.9	2.1	4.5
Academic institutions	4.2	3.9	4.0	4.2	4.3	3.2	2.4	4.5	3.3	2.8	4.0	3.0
Development agencies	4.4	2.8	3.0	3.3	3.7	3.5	3.6	3.6	3.6	3.0	2.2	3.9
Research institutions	4.3	3.8	3.9	4.2	4.2	3.3	2.6	4.2	3.3	2.9	3.5	2.9
Civil society	4.6	1.7	2.5	2.3	2.3	3.0	4.1	2.6	3.7	2.7	1.5	3.7