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ENHANCING RESEARCH COLLABORATIONS

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For research to contribute to addressing major social, environmental and technical problems, collaborations across disciplines and between researchers and practitioners are increasingly being seen as essential. Three activities critical to successful research collaboration are: a) effectively harnessing differences, b) setting defensible boundaries and c) gaining legitimate authorization.

Integration Insights is a series of digests of concepts, techniques or real-world examples of integration in research.

INTRODUCTION

For research to contribute to addressing major social, environmental and technical problems, collaborations across disciplines and between researchers and practitioners (including government policy makers, business leaders, and community advocates) are increasingly being seen as essential.

There are some key practical issues about research collaborations which seem to have received little attention, so that investigators funded to lead partnerships are often left to learn by trial and error, making success a hit-or-miss affair. This *Integration Insight* provides an overview of three areas critical to successful research collaboration: a) effectively harnessing differences, b) setting defensible boundaries and c) gaining legitimate authorization.

EFFECTIVE HARNESSING OF DIFFERENCES

Collaborations occur for a range of reasons. Most can be boiled down to one overarching consideration, namely that the point of working with someone else is that they have different perspectives, skills, resources or other attributes that contribute something relevant to addressing the research problem, either in improving understanding about it or in implementing that understanding in decisions and action.

A critical element of collaboration is to recognise that differences between research partners fall into two categories. One involves the differences that are key to and underpin the partnership, which must be effectively harnessed. The second is the differences that are incidental to the collaboration and that may undermine the achievement of its goals. These differences must be effectively managed.

Although effective integration is essential for research collaborations, there is currently no agreed systematic approach to the synthesis of understandings developed in different disciplinary and practice contexts. Consideration of six questions (see *Integration Insights #1*) provides a structured method for describing how integration is achieved:

1. integration **for what and for whom**?
2. integration **of what**?
3. what was the **context** in which the integration occurred?
4. integration **by whom**?
5. **how** was the integration undertaken? and
6. was the integration **successful**?

This framework can help research collaboration leaders and managers, as well as those involved in the collaboration, to think more clearly about what they are trying to achieve and how they are going about it. Furthermore, documentation and sharing of these insights within the research community provides the substrate for learning how to more effectively achieve the core integrative tasks of research collaboration.

For an example of the application of this integration framework see *Integration Insights #2: Illustrating a Systematic Approach to Explain Integration in Research – The Case of the World Commission on Dams.*

AMELIORATING PROBLEMS FROM INCIDENTAL ATTRIBUTES

A linked challenge for research managers is that the differences between partners are not confined to those which progress the collaboration. There are also differences in personal attributes, incentives required, conceptualisations of research, working style and other attributes which can lead to unproductive conflict. The task for research managers is not to eliminate disagreements and competition, which can provide a vital stimulus to creativity, but to minimize the tensions and disputes which prevent people from working together constructively.

There are two strategies which may be useful. One is to foster reciprocity. In other words partners treat each other as they wish to be treated, and that rewards resulting from the research collaboration are allocated commensurately across the research partners, in proportion to their contributions. The second is to build on a broad sweep of knowledge about personality differences, conflict resolution, building trust and so on, which has been gained in business, community development and other areas. Some simple techniques can be surprisingly effective. Personality assessments, commonly used in team building, often result in conflict melting away, as participants realise that the annoying behaviours of others are not designed to be provocative but simply reflect different psychological make-up and orientation to the world.

SETTING DEFENSIBLE BOUNDARIES

Consideration of how to harness differences raises questions about which differences – in terms of disciplinary and practice perspectives – to include in the research collaboration. How can a research manager tell what all the relevant perspectives are likely to be? Given that no research can be fully comprehensive, how should they decide where the boundaries are set? How can they best cope with the distortions introduced by inevitable limitations, such as a set amount of funding and restricted access to personnel?

Two areas of existing research provide useful starting points for thinking about how to set defensible boundaries – scoping and Critical System Heuristics.

Scoping

In terms of scoping a series of questions can provide a starting point (Bammer, 2006):

1. What is known about the problem?
2. What can different interest groups and academic disciplines contribute to addressing this problem?
3. What areas are contentious?
4. What are the big picture issues? In other words, what are the political, social and cultural aspects of the problem?
5. Why is this problem on the agenda now?
6. What support and resources are likely to be available for tackling the problem?
7. What parts of the problem are already well covered and where are the areas of greatest need?
8. Where can the most strategic interventions be made?

The first four questions help identify the dimensions of the problem, while the last four help set priorities.

Critical Systems Heuristics

Ulrich's Critical System Heuristics (2005) provides the second useful approach to boundary setting, through another helpful set of questions that can be adapted to thinking about boundaries in research collaborations:

1. the motivation for the collaboration,
2. the sources of power in the collaboration,
3. the sources of knowledge for the collaboration, and
4. the sources of legitimation for the collaboration.

In thinking about the *motivation* for the collaboration, key questions for determining the boundaries are: Whose interests ought to be served? What should the consequences of the research be? How should success be measured?

In thinking about *sources of power*, key questions are: Who ought to be the decision maker i.e. to be able to change the measures of success? What resources and other conditions of success should the decision maker control? What conditions should the decision maker not have control over?

In terms of *sources of knowledge*: What should count as relevant knowledge and know-how and what should be its role? Who should be involved? Who or what guarantees that the findings will be implemented?

Finally, in terms of *sources of legitimation*, key questions for determining the boundaries are: who should argue the case for those who are affected by the research but who cannot speak for themselves (this can include non-human nature)? How are those who cannot speak for themselves treated in the research? What should the visions of success of those involved and those affected be and how should differing visions be dealt with?

Managing Inevitable Restrictions

The related task for research managers in setting defensible boundaries involves balancing what the project is aiming to achieve with inevitable restrictions. Two very common limitations are funding and time, as it is rare for projects to have bottomless money and endless time available. There are also a range of other restrictions which can apply to particular collaborations. High-profile projects can be subjected to political pressure which can affect the boundaries. On a different scale, power imbalances between disciplines and practice areas or between individuals can also distort the project boundaries.

GAINING LEGITIMATE AUTHORIZATION

Attention to boundaries, and especially the inclusion of powerful stakeholders in research, in turn leads to considerations of legitimacy and authorization. The vast resources and extent of collaborations involved in mega-projects have always required additional sanction and make the need for external legitimation plain. Further they demonstrate that authorisation comes at a cost, with at least some restriction on research independence. An important issue for research collaboration leaders and managers is, therefore, working out what level of authorization is needed, how to procure it, and how to minimize the strings attached.

EVALUATING RESEARCH COLLABORATIONS

One benefit of thinking more systematically about research collaborations is that the insights gained can be useful for evaluation. The topics discussed above – harnessing differences, setting defensible boundaries and gaining legitimate authorization – provide some additional considerations for research design, methods, results and conclusions.

In terms of research *design*, evaluators could ask: How defensible are the boundaries of the collaboration? Were all the necessary actors and considerations included? Were limitations dealt with effectively? Was the normative base sound?

In terms of *methods*, key questions include: Were effective integrative methods used? Would other methods have made useful contributions? Were incidental differences

managed effectively or did they get in the way of producing successful outcomes? Were the collaborators treated fairly in terms of meeting their interests in the collaboration and in the distribution of the rewards of the collaboration?

For *results*: How well did the collaboration meet its aims? Was effective integration achieved? Were influential new insights produced? Did effective action result?

And, finally, in terms of *conclusions*: Can the claims made by the researchers be substantiated? Has research independence been compromised?

CONCLUSION

As researchers are increasingly called on by governments, business, the representatives of powerless community groups and others to assist with tackling the complex problems societies face, collaborations are growing in importance. This *Integration Insights* provides a number of ideas to stimulate exploration of key elements of partnerships that are likely to influence collaboration success.

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