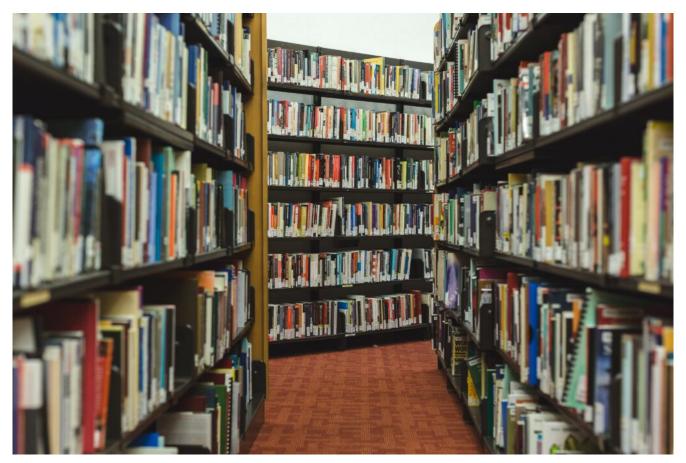# How to Manage International Multidisciplinary Research Projects

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Increasingly, research funders require scientists from different national and disciplinary cultures to collaborate intensively to respond effectively to global societal challenges. Research teams are expected to adopt an integrated international multidisciplinary approach in their research projects and demonstrate economic, social and cultural impacts. The Elgar guide, *How to Manage International Multidisciplinary Research Projects*, featured in this article and the RSA Professional Development Training Webinar series, was designed primarily to meet the needs of early and mid-career academic and non-academic researchers from across the disciplinary spectrum in a wide range of international and sectoral settings. The guide and the Elgar web companion support

researchers preparing to manage international multidisciplinary projects by facilitating methodological learning and knowledge exchange.

Managing a complex research process

Managing collaborative projects is always challenging. When the reason for undertaking a research project is to find solutions to global societal challenges, how to move from multinational and multidisciplinary to what are genuinely integrated international and interdisciplinary collaborations then becomes the major concern.

A key feature of the book is how it guides project coordinators and team members through the complexities involved in managing the different stages of the research process. Drawing on illustrative case studies of real-life research collaborations, supported throughout by readily accessible materials and online resources, the chapters adopt a common format enabling them to be read both horizontally and vertically.

The authors describe how they developed strategies to bridge often deep-seated cultural, sectoral, societal and disciplinary divides and how they implemented practical integrated approaches to delivering high-quality, high-value research outputs.

From national to international and from disciplinary to interdisciplinary

Not all international research is comparative, but not all multidisciplinary research is interdisciplinary. The challenges facing project coordinators vary depending on the degree of complexity of the project design, which is, in turn, determined by the research question, scale of funding and its duration, and the number and characteristics of team members. Many allegedly international comparative reports and publications present parallel studies avoiding some of these challenges. The same applies to multidisciplinary studies when contributions are juxtaposed rather than integrated or interdisciplinary.

The ten case studies documented in the guide combine combinations of countries from five continents representing the most conceivable mixes of disciplines. As illustrated in the table, fewer than half the project coordinators are UK-based social scientists, but more than half the authors are UK-based social scientists who are native speakers of English. All the case studies involve social scientists

with experience in multicultural collaborative work.

Many disciplines, particularly within the social sciences, are hybrids or chameleons: demography, geography (LCEDN), anthropology, public administration (TROPICO), social policy, and town planning are good examples. Their training methods equip researchers with the skills needed to work across disciplines. Many more disciplines are methodological hybrids as they routinely provide training in various methods, including statistics and advanced information technologies.

Composition of international and multidisciplinary project teams		
Project	Countries and (nationalities)	Disciplines
AMR	UK, India	biochemistry, bioengineering, environmental science, geochemistry, **social sciences**
BIAS	UK, **Canada** (Chinese)	computing, **management**, mathematics, **sociology**, statistics
B–SET	UK, Africa, Middle East, Asia	**economics**, technology, veterinary science
CLICCS	**Germany**	computing, earth systems, geophysics, meteorology, physics, **political science, sociology**
EPPIC	**UK**, Austria, Denmark, Germany, Italy, Netherlands, Poland	**anthropology**, criminology, health policy, psychology, **sociology, social policy**
FFP	**UK**, Norway, Portugal	**anthropology, sociology**, statistics
LCEDN	**UK**, Africa, South America	anthropology, civil engineering, economics, electrical engineering, environmental science, **human/political geography, sociology, social policy**
POLKU	**Finland**, Denmark, Netherlands, Sweden, UK	economics, law, **public policy, social policy, sociology**
PRO-RES	**UK**, Belgium, Croatia, Estonia, France, Greece, Italy, N. Ireland	**business ethics**, computer science, **economics**. health sciences, marine biology, nanotechnology, international relations, life sciences, philosophy, physics, psychology, research ethics, **social science, sociology**
TROPICO	**Norway**, Belgium, Denmark, Estonia, France, Hungary, Netherlands, Spain, Wales	**public administration**

Notes: Bold indicates countries of coordinators and social science disciplines.

Several of the case studies involve broadly defined cognate disciplines within the social sciences (BIAS, EPPIC, FFP, POLKU). But even here their component disciplines may be 'siloised', as is often the case within the social sciences more generally.

Four of the projects depended on their ability to bridge the deep divide between the natural and social sciences (AMR, CLICCS, LCEDN, PRO-RES) for their success. Arguably, they were facing the greatest challenges. The sections of the chapters on team building and research design and methods describe how team

members achieved integration of languages, cultures and disciplines. The lessons learnt, summarised at the ends of chapters and in the video clips on the Elgar companion web page, stress the importance of scrutinising concepts, terminology, conventions and methodologies, of building awareness of differences and of reaching a common understanding in dedicated on-the-job training sessions, as well demonstrated in the BIAS case study.

Project funding and management

National government departments, research councils, EU Commission research and policy Directorates-General, funded the projects. Some projects were co-funded; others were expected to top up limited budgets from their own resources.

Despite attempts to harmonise funding schemes, national and international project funders continue to have their own priorities, requirements and expectations when drawing up calls for proposals and selecting and financing research programmes and awards. Except for a European Research Council award (FFP), all the projects featured in the guide were submitted following calls for proposals to work on topics identified by the funders and using prescribed methodologies and, in some cases, disciplinary mixes. The funders stipulated the time frames, distribution of resources between budget heads, and deliverables within the budget (impacts, knowledge exchange, infrastructures).

All the case study authors address how to reconcile the requirements of different funders and other stakeholders, researchers' institutions and individual career plans. In doing so, they explain how they resolved the tensions between participants in identifying a range of outputs, agreeing and implementing dissemination and publication strategies. LCEDN and CLICCS are good examples of large long-term projects involving multiple funding sources and institutions (academic, government departments, research councils, and third sector organisations). These projects demanded both practical policy solutions and academic publications that would contribute to the personal career trajectories of individual team members who had been selected for their complementary cultural and disciplinary interests, personal skills and characteristics, and expert knowledge of the research topic.

The POLKU case study exemplifies the dilemma of a small project team whose members were aware that the government funders were not interested in

academic publications, which had to be produced using their limited resources.

The TROPICO author explains how, in the absence of appropriate highly-rated interdisciplinary journals, the team members had to decide whether to publish individually in mainstream single-discipline journals. They also had to contend with the issue of how to fund and support open-access publishing.

Several of the case studies address the question of whether projects should engage professional administrators. PRO-RES is a good example of the benefits for project coordinators of employing a professional research manager (in this case, from an unrelated background in astrophysics), as he recounts in a video clip. The B-SET project on capacity building, funded by a UK government department, was driven by a research administration office. The presenter of the EPPIC video clip reflects on how a professional administrator would have relieved the coordinator of some of the burden of non-scientific tasks.

Lessons learnt

A core feature of the Elgar guide is its emphasis on lessons learnt from the management of and participation in international multidisciplinary research projects. The case study authors were invited to reflect, with their team members, on the positive and negative lessons they gleaned from their experience of contributing to the research projects described in their chapters. The lessons they drew are reported at the end of each case study chapter (indexed under 'lessons learnt by project managers') and in the video clips. Recurring lessons include:

- Consider engaging a professional administrator to support the project coordinator and know how to delegate tasks (work packages).
- Avoid being overly ambitious, and ensure feasibility while catering to contingencies.
- Manage team members' priorities, expectations and commitments (personal & institutional) and stakeholders (funders & end users).
- Select team members with complementary cultural and disciplinary interests, personal skills and characteristics.
- Discuss and understand cultural and disciplinary concepts, conventions, methods, dissemination, and publication strategies.
- Fully integrate less experienced researchers by providing dedicated on-the-job training.

Key takeaway

In the context of present-day global societal challenges, the future achievements of researchers in the international arena, especially in the social sciences and humanities, depend not only on their proven capacity to work cross-nationally but also on their ability, irrespective of their disciplines to collaborate effectively with researchers in other disciplines to promote international methodological learning, innovative forms of cooperation and knowledge exchange.

About the author

Professor *Linda Hantrais* (webpage), visiting professor at the London School of Economics and Political Science, emerita professor in European social policy at Loughborough University, UK, and chair of the UK Academy of Social Sciences' International Advisory Group, edited the Elgar How to… guide. She has published widely on the theory, methods and practice of international multidisciplinary research.

RSA Professional Development Webinar Series

How to Manage International Multidisciplinary Research Projects has been featured in the RSA's Professional Development Webinar Series in a session chaired by Dr Dave Filipovič-Carter, Director of Education-Training Ltd. A short video presentation on the content can be accessed at the RSA Lounge and in the Elgar Web Companion to the book.

For additional inputs

Please e-mail Linda Hantrais (e-mail) and Dave Filipovič-Carter (e-mail) if you are interested in follow-up activities such as bespoke training events, webinars, workshops or discussion groups or if you would like to write up your case study for the Elgar Web Companion using the framework provided for the book chapters.