i2S News

May/June 2021, #56

Welcome to the May/June i2S News. This is our bi-monthly notification of additions and updates to the resources on the i2S website (http://i2s.anu.edu.au/resources). i2S News also provides a list of the latest blog posts on the Integration and Implementation Insights (i2Insights) blog (https://i2insights.org).

We are pleased to report that the blog index list of terms and definitions is now on BioPortal, under Integration and Implementation Sciences Vocabulary. BioPortal is "the world's most comprehensive repository of biomedical ontologies." We were delighted to be invited to contribute and anticipate that the i2Insights vocabulary will be useful for those undertaking interdisciplinary, transdisciplinary, systems and related work on complex biomedical, social and environmental problems.

Please stay safe.
Gabriele Bammer and Peter Deane

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FEATURED TOOL

Collaboration: managing expectations

Purpose: To highlight four areas (incentives, timelines, decision making and dissemination) where collaborations often run into trouble and to provide sets of questions that can clarify partner expectations at the outset of the partnership.

Description: Questions are designed for both academic and practitioner partners and aim to clarify priorities and assumptions, so that potential tensions can be turned into productive and creative exchanges. While the questions are written for collaborations between academics in developed countries and practitioner partners in developing countries, they can easily be adapted for other collaborations, including between academics only.

The process involves the following steps:
- Early in the collaboration, partners first address the questions on their own and then come together to discuss their answers.
- The outcome of the discussion is recorded.
- There are check-ins during the course of the project to review if adjustments are needed.

Before embarking on this process, it is useful for projects to have an exploratory phase where partners can get to know each other and the contexts in which each of them is working, and where initial assumptions and misunderstandings can be clarified. Finding out about previous collaborative experiences can be helpful.

Incentives

Why is each party interested in the research partnership and what do they expect to achieve? It is important to ensure that there is real buy-in at all levels on both sides of the collaboration.

Ask each other	Ask practitioner partners	Ask academic partners
What do you want out of this collaboration? Ask "why" five times to get to deeper levels of understanding about what is really motivating the research study. How do you see the roles and responsibilities of your partner? Who is part of the team? Do we have sufficient support for the project?	How do you plan to use the results? Is there a specific decision(s) or donor report(s) that the research results will inform? What is at stake or how important are the results to your organization? What kind of results do you need? *...column continues over page...*	Are these data for PhD or other student projects or for promotion? Are you looking for data that will yield a peer-reviewed paper? *... column continues over page...*

| | What is already set in stone and what can still be changed or tweaked?

How will mixed, null or negative results be received? | Are there specific methods that are a must for you? What other characteristics of the study are nonnegotiable for you? Conversely, what components of the research design are flexible and can be adjusted to fit practitioner needs?

Do you see yourself as the primary owner of the data? What does this mean for the ability of the practitioner to use the data? For you, is the release of data time-sensitive, and what are those timelines?

What do you need the practitioner to provide? |

Timelines

The practitioner world tends to work on annual project and donor timelines, which have deadlines for reporting, renewals, and fundraising. Academic timelines tend to revolve around windows of opportunity to access funding and the academic calendar for teaching, dissertations and career advancement.

Ask each other	Ask practitioner partners	Ask academic partners
What timelines matter most? When do big decisions need to be made? Can we create a common, shared calendar, updated in real time? Can there be a regular check-in time? Can we build pivot or exit points into the partnership?	Are you bound by project-reporting or grant timelines? What calendar do you follow? Are there any important funding decisions we should know about? What level of results do you need by these various timelines?	What academic timelines matter and what are the key dates when you need results? How much time are you personally planning to spend in-country for this project? Will you be in country for key decision points in the study? *... column continues over page...*

		How much time are you expecting to spend on this research? Will you be conducting other research projects at the same time? Do you have enough people on your team to cover all the required field work, data analysis, and writing or are you expecting the practitioner to provide support?

Decision making

How will decisions in the project be made and by whom? Clarifying roles and responsibilities as well as decision-making processes can support productive exchange.

Ask each other	Ask practitioner partners	Ask academic partners
How should the research be designed? Who has the final word on critical components of the intervention design and the research design?

Who are the key decision-makers? What are their roles and responsibilities in the research collaboration? What is the process for decision-making for projects and research? | Who are the main people at the organization who will be communicating with the academics?

What is the role of the monitoring and evaluation team in the collaboration, their capacity to participate, and also their interest in gaining practical skills through the collaboration?

Are there stakeholders outside the practitioner organization who should be included in some of the initial discussions? | Who is on the research team? What roles do they play and who is responsible for key decisions on research questions, designs, and implementation?

Would research managers consider working from the practitioner organization's office for a period of time?

Who at the university is vested—or at least interested—in the collaborative research? Who might spend time discussing the expectations and interests with the wider group of professors, students, and research staff? |

Dissemination

Practitioners and academics often think differently about how to use results. For academics, it's typical to think in long timelines, towards peer-reviewed publications. For practitioners, timelines are often shorter, and results may be used to adjust programs, influence policy or inform a public dialogue.

Ask each other	Ask practitioner partners	Ask academic partners
What is the internal review process for each entity before we can share results? How many iterations or reviews of an output are reasonable? How much lead time does reviewer need? Does your university or organization have requirements or a process to follow for joint publications, co-branding or using each other's logos? What about sharing news about the collaboration on social or traditional media? How will we spread the word about the results?	What are the minimum outputs that you need us to produce from this collaboration? Who is your target audience? Which are essential? Can you provide examples of what these outputs should or have looked like? What outputs do you want to produce yourself but would like the academics to review?	Who owns the data? What are the data sharing protocols? Will experimental results need to be replicated before they can be used for program or policy recommendations? How much time can you set aside for developing non-academic outputs? Can you offer opportunities for teaching, skills sharing, and capacity-building for practitioner staff?

Reference:

- This is adapted from: MIT Governance Lab (MIT GOV/LAB). 2020. "How to Have Difficult Conversations / A Practical Guide for Academic-Practitioner Research Collaborations". Version 2. Massachusetts Institute of Technology Governance Lab (United States). Authors: Varja Lipovsek and Alisa Zomer. Designers: Susy Tort and Gabriela Reygadas. (Online – open access): https://mitgovlab.org/resources/updated-guide-how-to-have-difficult-conversations/

Location of this resource on the i2S website:
https://i2s.anu.edu.au/resources/managing-expectations

Additional tools can be found at: http://i2s.anu.edu.au/resources/tools

FEATURED VIDEO

Transdisciplinary research: problem framing

Purpose: To describe what is involved in the problem framing stage of transdisciplinary research, where the project is envisaged and goals, problems and research are determined.

Description: Problem framing is the first of three distinct phases in transdisciplinary research. It involves identifying relevant understandings of the problem situation, to:

- clarify who to involve in the project
- define achievable project goals.

The three phases are shown in the figure below for transdisciplinary research on sustainability issues. Framing the problem is followed by jointly conducting the research and then exploring the impact.

Based on Pohl et al. (2017)
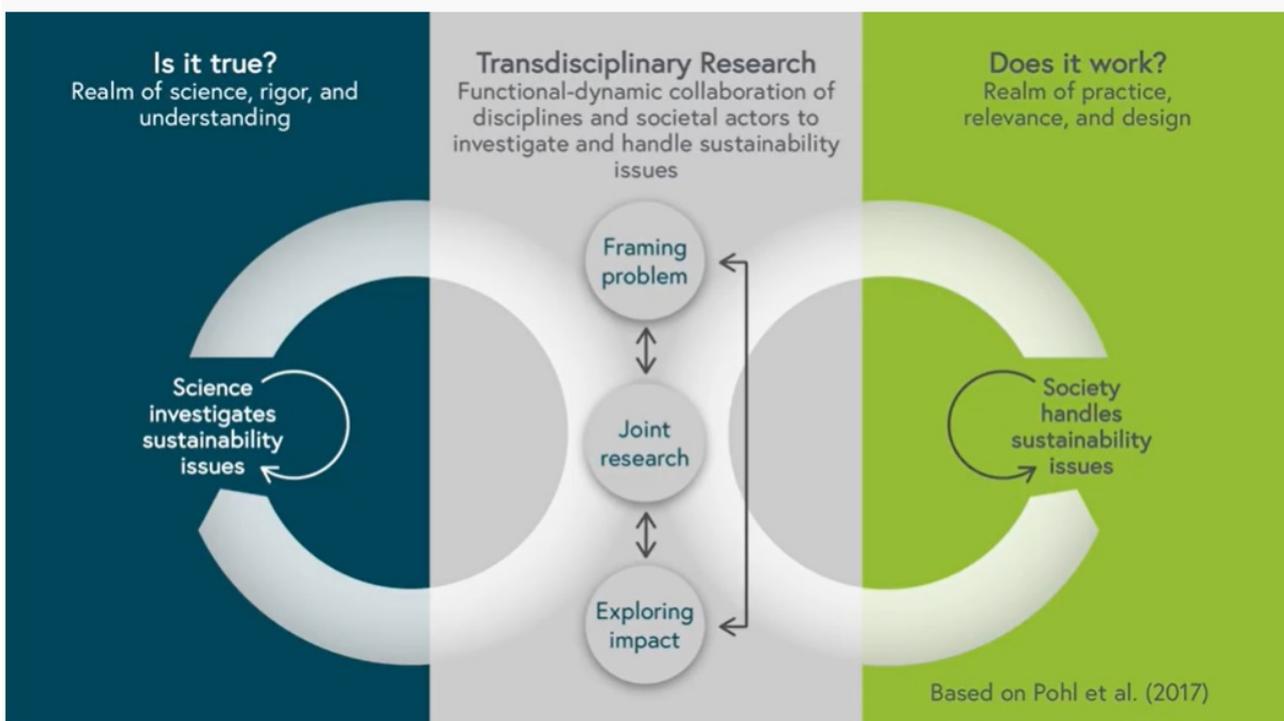
Transdisciplinary research projects typically start with a topic, rather than a research question. Topics are acknowledged to be complex and there are many ways to address them. For example, a topic such as starvation could be addressed by:

- a company with a business idea
- a government agency with a food program
- an investigation focused on the just distribution of resources
- an investigation focused on economic drivers.

A transdisciplinary project then needs to bring together the expertise needed for comprehensive understanding and management of an issue. In order to make a difference regarding the problem this needs to include those affected by the problem in a negative or positive way, as well as those who have the power to make a change. Expertise, power and interest should all be considered in deciding who to involve. Stakeholder analysis is a useful tool. Further, different understandings should be made explicit and known to all participants.

Many participants will be involved by being physically present in the project, but this may not be possible for all participants, for example those involved in illegal activities. Nevertheless, all relevant perspectives should be taken into account.

Australian National University

Additional issues to be addressed at the problem framing stage are to clarify:
- how the scientific knowledge generated about the problem will be linked to the societal issues
- each participant's perspective on the project goals. The outcome spaces tool can be useful here differentiating between effects on the situation on the ground, knowledge about the problem or learning processes among the participants and beyond.

The aim of problem framing is to:
- specify a shared problem that is socially relevant and scientifically interesting
- identify a team of researchers from different disciplines, as well as stakeholders from different sectors of society, willing to work on it
- clarify the different ways group members frame the problem
- agree on a set of achievable project goals.

References:
- This is based on a lecture by Christian Pohl in week 3 of the Massive Open Online Course (MOOC) "Partnering for Change – Link Research to Societal Challenges". (Online):
    - http://www.transdisciplinarity.ch/en/td-net/Kompetenzvermittlung/tdMOOC.html
    - https://www.futurelearn.com/courses/partnering-for-change.
    - The video (5:30 minutes) is available on the Integration and Implementation Sciences (i2S) YouTube channel at: https://youtu.be/Qeko7DZEv2s
- Hirsch Hadorn, G., Bradley, D., Pohl, C., Rist, S. and Wiesmann, U. (2006). Implications of transdisciplinarity for sustainability research. *Ecological Economics*, **60**, 119-128.
- Pohl, C., Krütli, P. and Stauffacher, M. (2017). Ten reflective steps for rendering research societally relevant. GAIA, 26, 1: 43-51. (Online – open access) (DOI): https://doi.org/10.14512/gaia.26.1.10

Location of this resource on the i2S website:
https://i2s.anu.edu.au/resources/problem-framing

LATEST i2INSIGHTS BLOG POSTS

The i2Insights blog (http://i2insights.org) has recently published the following posts:

Five insights on achieving research impact
By Niki Ellis, Anne-Maree Dowd, Tamika Heiden and Gabriele Bammer
https://i2insights.org/2021/06/01/five-insights-on-research-impact/

Gradients of agreement for democratic decision making
By Hannah Love
https://i2insights.org/2021/05/25/gradients-of-agreement-tool/

Listening-based dialogue: Circle of dialogue wisdom / Diálogo basado en la escucha: Círculos de diálogo entre saberes
By Adriana Moreno Cely, Darío Cuajera Nahui, César Gabriel Escobar Vásquez, Tom Vanwing and Nelson Tapia Ponce
https://i2insights.org/2021/05/18/circle-of-dialogue-wisdom/

What's required for universities to address complex societal challenges?
By David Hart and Linda Silka
https://i2insights.org/2021/05/11/universities-and-complex-societal-challenges/

Enabling divergent and convergent thinking in cross-disciplinary graduate students
By Gemma Jiang
https://i2insights.org/2021/05/04/educating-for-divergent-and-convergent-thinking/

Investing in change through research funding
By Petra Lundgren
https://i2insights.org/2021/04/27/research-funding-for-change/

Six ways facilitation skills can improve cross-disciplinary team leadership /
ست وسائل من مهارات التيسير لتطوير قيادة الفريق البحثي عابر التخصصات
By Manal Affara
https://i2insights.org/2021/04/20/facilitation-for-cross-disciplinary-teams/

How systems thinking enhances systems leadership
By Catherine Hobbs and Gerald Midgley
https://i2insights.org/2021/04/13/systems-thinking-and-leadership/

Three ways research perpetuates injustices
By Barış Bayram
https://i2insights.org/2021/04/06/research-perpetuating-injustices/

FEATURED JOURNAL AND JOURNAL NEWS

Systems

"*Systems* is an international, peer-reviewed, open access journal on systems theory in practice, including fields such as systems engineering management, systems based project planning in urban settings, health systems, environmental management and complex social systems". It aims to provide a venue:

- "that supports a constructive exchange of ideas" and
- "for the quick and global dissemination of results of cutting-edge research in various areas of systems science and systems-related fields."

"An increasing number of researchers are realizing the enormous potential of systems thinking in managing the many unprecedented and complex issues in all areas of need." The journal provides an outlet "for the manuscripts of these researchers who often find it difficult to publish their work in conventional discipline focused journals."

The journal "publishes original research papers, comprehensive reviews and communications" and encourages "scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers."

The scope of the journal covers:
- socio-technical systems
- social systems
- management systems
- complex systems
- systems engineering
- systems architecting
- systems engineering management
- complexity
- network theory
- decision theory.

"The International Society for the Systems Sciences (ISSS) is affiliated with Systems and the journal has been publishing since 2013."

- **Website**:
  - https://www.mdpi.com/journal/systems

Location of this resource on the i2S website:
https://i2s.anu.edu.au/resources/systems

Call for papers by the new *Global Social Changes Journal*

The *Global Social Changes Journal* asks "how can we re-imagine society in an era of climate change, pandemic, hunger, poverty, and other pressing global societal challenges". In this reimagining, it aims "to become the journal of choice to address the complexities of global social challenges across disciplines. It will be the first such journal to be based in the social sciences, while also engaging with research from humanities, arts and STEM. Emphasising marginalised, minority and indigenous world views, the journal will be an important home for research that contributes to the creation of alternative futures that acknowledge past injustices and are socially and environmentally just and sustaining."

The journal will be publishing its first articles in 2022 and is seeking submissions of research articles that talk to the themes of the journal. Most relevant are:
- Equality, Diversity and Inclusion
- Interdisciplinary and Transdisciplinary Approaches

The journal expects to publish research articles as well as "to publish non-traditional outputs, including shorter debate pieces, linked articles with interdisciplinary comment, policy papers, and to encourage video, podcast and blog content to accompany articles in order to reach a wide audience".

The *Global Social Changes Journal* "aims to encourage inclusivity and diversity in publishing" and welcomes "contributions from researchers and practitioners at all career stages from around the world."

- **Website**:
  - https://bristoluniversitypress.co.uk/journals/global-social-challenges-open-journal/call-for-papers
    - Contact details for more information can be found via the above URL.

Call for papers by the new Journal of Systems Thinking (JoST)

The *Journal of Systems Thinking* (JoST) is a rolling, online-only, open-access, free-to-publish, double-blind peer-reviewed journal dedicated to basic scientific research, innovation, and public understanding in the areas of Systems Thinking (cognitive complexity), Systems Mapping (visual complexity), Systems Leadership (organizational complexity), and Systems Science (ontological complexity).

- **Website**:
  - https://journalofsystemsthinking.org/index.php/jost/about

Additional journal information can be found at: http://i2s.anu.edu.au/resources/journals

FEATURED NETWORK

National Co-ordinating Centre for Public Engagement (NCCPE)

The National Coordinating Centre for Public Engagement (NCCPE) was established to "support a culture change in the UK higher education sector" by supporting "universities to increase the quality and impact of their public engagement activity." It is primarily focused on the UK, but has a growing international reputation and international members can join networks organised by NCCPE and access the resources they produce.

NCCPE is not a conventional membership organisation, but supports a variety of networks (accessible via: https://www.publicengagement.ac.uk/support-engagement/engagement-professionals/build-network):

- "*Engage Academy* for engagement professionals, which provides continuing professional development, and an opportunity to engage with a range of other participants.

- *Engage Researchers'* Academy for researchers with a passion for engagement, which supports participants to develop the skills and experience to work with others and improve the impact and relevance of their research.
- *Public Engagement Network*, a jiscmail list for people committed to public engagement with higher education, who want to share ideas, opportunities, experiences and problem solve together. In addition, participants can advertise events, research and news that they think will be relevant to the group.
- *Engaged Practice Learning Exchange* (EPLE) are an opportunity for those engaged in practices and programming around public engagement and other forms of community-university activity to have some time and space to stimulate innovation in what they do" and this is undertaken "through providing workshops at international conferences that focus on public engagement and community-university engagement."
- "*UK Community Partner Network* is a network of people involved with community-based organisations interested in working with universities to tackle social concerns and inequalities."
- "*Public Engagement Professionals (PEP) Network* aims to support public engagement professionals across the UK working in higher education and research to access continuing professional development (CPD), peer support and the latest thinking on engagement." The PEP Network welcomes "those working in similar roles in the sector, or those working with higher education institutions, research institutes or funders to coordinate and support public engagement." The network also welcomes "members from outside the UK, but the majority of our membership is UK-based and therefore the content of events/discussions reflects this."

NCCPE also provides, via its website, resources on engagement, which focuses on learning about, delivering and supporting effective public engagement. They run a blog, a yearly conference, provide education, and part fund (with the *University College of London (UCL) Institute of Education*) the journal 'Research for All'.

NCCPE promotes expanding the role of engagement within higher education through their EDGE ('Embryonic', 'Developing', 'Gripping' and 'Embedded') tool, which assesses the extent to which an institution supports public engagement and the 'Manifesto for Public Engagement', which invites higher education institutions to make a commitment to public engagement.

NCCPE was founded in 2008.

- **Website:**
  - https://www.publicengagement.ac.uk/

Location of this resource on the i2S website:
https://i2s.anu.edu.au/resources/national-co-ordinating-centre-for-public-engagement

Additional professional associations and networks can be found at:
http://i2s.anu.edu.au/resources/associations_networks

Operation Research (OR63) Annual Conference Online: Creating a Better Future, including the Systems Thinking stream

"OR63 will explore how operational research can help society and organisations move towards a post-COVID-19 world. Whether facilitating improved sustainable solutions, transforming the opportunity that digitalisation brings to society or developing data-driven support tools, operational research has a tremendous impact on the world in 2021".

This year's annual conference is relevant to those in academia, business and industry, or the public sector.

There are thirty topic streams that will be featured at OR63, and of particular interest to readers of this newsletter are the following:
- Contemporary Project Management
- Forecasting
- Multi-Criteria Decision Making
- Simulation
- Soft OR and Problem Structuring Methods
- Systems Thinking

In particular, we highlight the systems thinking stream. As "many Operational Research (OR) and Systems practitioners share a common interest in systemic intervention to address highly complex organizational, social and environmental problems", the system thinking stream provides an "opportunity to bring people from both the OR and Systems communities together to learn from one another, so both can be enriched." The systems thinking stream co-ordinations encourage the submission of abstracts discussing applications of:
- "systems thinking
- methodological innovations
- theoretical contributions
- thoughts on the diversity, impacts and ethics of systemic OR practice
- connections with other areas of OR (eg., problem structuring, community OR, public policy)
- reflections on the past, present and future of Systems Thinking in OR"

The conference is being held virtually on 14-16 September 2021

> For further details see:
> - https://www.theorsociety.com/events/annual-conference/
>   - Deadlines for submissions is 11 June 2021
>   - System thinking stream: https://www.theorsociety.com/events/annual-conference/or63-online-streams/systems-thinking/

Additional conference information can be found at:
http://i2s.anu.edu.au/resources/conferences

ABOUT i2S NEWS

The aim of this newsletter is to provide regular (bi-monthly) updates about new resources added to the Integration and Implementation Sciences website (http://i2s.anu.edu.au/resources) and the Integration and Implementation Insights blog (http://i2Insights.org). It also provides occasional conference and other news items. These resources are useful for researchers interested in Integration and Implementation Sciences (i2S), which underpins the investigation and tackling of complex real world problems, by:

- Synthesizing knowledge from different disciplines and stakeholders,
- Understanding and managing diverse unknowns, and
- Providing integrated research support for policy and practice change.

In general, each issue features tools (concepts and methods), either a useful compilation or one or more examples of note. We also provide information about journals, professional associations & networks and conferences where researchers can learn from others, report their findings and interact with like-minded peers.

i2S News is archived at: http://i2s.anu.edu.au/what-i2s/i2s-publications/i2s-news.

Useful links:
- i2S website: http://i2s.anu.edu.au
- i2Insights blog: http://i2Insights.org
- i2S on YouTube: https://www.youtube.com/user/i2sTalks
- LinkedIn group "Global Network for Research Integration and Implementation": https://www.linkedin.com/groups/4888295/

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