Integration and Implementation Sciences (i2S)

Australian National University

i2S News

April - June 2022, #59

Welcome to a new look i2S News and the first for 2022!

We are changing the focus and frequency of i2S News. We are concentrating on the latest developments in Integration and Implementation Sciences (i2S) and aim to publish a News every three months.

The main aim of i2S is to provide theory and resources for improving research impact on complex real-world problems. Our target audience is researchers who tackle complex societal and environmental problems and who are interested in:

- Synthesizing knowledge from different disciplines and stakeholders,
- Understanding and managing diverse unknowns, and
- Supporting improved policy and practice responses to problems by government, business and civil society.

i2S therefore develops new tools, as well as compiling and sharing existing tools, in 11 main areas:

- understanding the processes involved in *change*
- improving *communication*
- understanding *context*
- effective *decision making*
- incorporating, harnessing and managing *diversity*
- *integration* of multiple and varied perspectives about any problem and insights into acting on it
- *research implementation*
- *stakeholder engagement*
- taking a *systems* perspective
- *teamwork*
- understanding and managing *unknowns*.

In highlighting what's new, i2S News provides information and updates about three major repositories that we curate:

- the i2S website (http://i2s.anu.edu.au), which provides a range of information about Integration and Implementation Sciences, including a new FAQ (frequently asked questions) section (https://i2s.anu.edu.au/what-i2s/faq/)
- Integration and Implementation Insights (http://i2Insights.org), which is a community blog, as well as a repository, for sharing concepts, methods and other research tools for understanding and acting on complex real-world problems
- the i2S YouTube channel (https://www.youtube.com/user/i2sTalks), which provides a range of videos about various aspects of i2S.

Other updates about i2S are also provided.

i2S News

Feedback and suggestions are always welcome!

Gabriele Bammer and Peter Deane

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i2S WEBSITE

Changes underway to the i2S website

As well as providing a range of materials about i2S, this website has provided information about tools, journals, professional associations and networks, and conferences. We are in the process of:
- providing more and updated information about i2S through the introduction of a new section of Frequently Asked Questions (FAQ). As FAQ are added to the website, extracts will be provided in i2S News. Extracts from the first two FAQ are provided below.
- moving the tools to i2Insights blog and repository or i2S Talks YouTube channel, or archiving them.
- liaising with another professional association about taking over the currently listed journals, professional associations and networks, and conferences.

Our current focus is moving tools from the i2S website to i2Insights blog and repository. You can see which tools have been moved at https://i2s.anu.edu.au/resources/list-of-relocated-resources/.

Until we find a confirmed home for the journals, professional associations and networks, and conferences, we will continue to maintain those resources, but not add to them.

FAQ: What are the major options for engaging stakeholders (i2S Stakeholder Engagement Options Framework)? (extract)

Key requirements for stakeholder engagement include:
- making available ways for stakeholders to provide: a) perspectives for a more comprehensive understanding of the problem, b) ideas about addressing it, c) insights into how the research can support policy or practice change
- being able to tailor the engagement to the willingness and capacity of the stakeholders to contribute, as well as the resources available to the researchers
- being able to include different stakeholders in different ways, as well as being able to include the same stakeholders in different ways in different parts of a research project
- reciprocity, *ie.*, the engagement also places obligations on the researchers towards the stakeholders.

The i2S stakeholder engagement options framework provides 5 ways for researchers to include stakeholders in a project: inform, consult, involve, collaborate and support. Each comes with a corresponding promise from the researchers to the stakeholders.

The full FAQ is available at https://i2s.anu.edu.au/what-i2s/faq/stakeholder-engagement-options.

FAQ: Where does i2S fit amongst transdisciplinarity, systems thinking, action research and similar research approaches? (extract)

Integration and Implementation Sciences (i2S) aims to be the discipline that underpins a range of research approaches that tackle complex societal and environmental problems. These are approaches that draw on the insights of different disciplines and stakeholders to develop:
1. a more comprehensive understanding of the complex problem, both what is known and unknown
2. more ideas for ways of addressing the problem
3. effective ways of supporting policy makers and practitioners from government, business and civil society in bringing about change to improve the problem.

Twenty-two approaches which i2S draws together are listed. Some aim to be comprehensive, such as transdisciplinarity, systems thinking and action research. Others address only a subset of the three tasks, such as implementation science, which focuses on effective ways of supporting policy and practice change, and the science of team science, which, although relevant to all three tasks, concentrates on the best ways of working together.

The time is right for developing ways of tackling complex problems that bring these different approaches together, as well as identifying and filling gaps that remain. This is the task that i2S has set for itself.

The full FAQ is available at https://i2s.anu.edu.au/what-i2s/faq/where-i2s-fits.

i2INSIGHTS BLOG AND REPOSITORY

New primer on understanding diversity

i2Insights has started to publish primers as introductions to the 11 main topics i2S covers.

A [primer on stakeholder engagement](#) was published in 2021 and a new [primer on understanding diversity](#) in mental models, perceptions of good research, power, values, interests, culture, personality and team roles has just been published.

Blog posts added in 2022

Integration and implementation insights (i2Inisghts) has added the following blog posts to its repository in 2022:

Analysing key policy actors with the alignment, interest and influence matrix (AIIM)
By Enrique Mendizabal
https://i2insights.org/2022/06/21/alignment-interest-and-influence-matrix/

Understanding diversity primer: 9. Team roles
By Gabriele Bammer
https://i2insights.org/2022/06/16/diversity-in-team-roles/

Clarifying incentives and expectations in research collaborations
By Alisa Zomer and Varja Lipovsek
https://i2insights.org/2022/06/14/collaboration-expectations/

Understanding diversity primer: 8. Personality
By Gabriele Bammer
https://i2insights.org/2022/06/09/diversity-in-personality/

Managing risk and equity in collaborative research
By Alisa Zomer and Selmah Goldberg
https://i2insights.org/2022/06/07/risk-and-equity-in-collaboration/

Understanding diversity primer: 7. Culture
By Gabriele Bammer
https://i2insights.org/2022/06/02/diversity-in-culture/

Facilitating narratives for knowledge co-production: A knowledge broker's role
By Faye Miller and Jess Melbourne-Thomas
https://i2insights.org/2022/05/31/narratives-for-knowledge-co-production/

Understanding diversity primer: 6. Interests
By Gabriele Bammer
https://i2insights.org/2022/05/26/diversity-in-interests/

Assessing assumptions about boundaries with critical systems heuristics
By Werner Ulrich
https://i2insights.org/2022/05/24/critical-systems-heuristics/

Understanding diversity primer: 5. Values
By Gabriele Bammer
https://i2insights.org/2022/05/19/diversity-in-values/

Four typical behaviours in interdisciplinary knowledge integration
By Annemarie Horn and Eduardo Urias
https://i2insights.org/2022/05/17/interdisciplinary-knowledge-integration/

Understanding diversity primer: 4. Power
By Gabriele Bammer
https://i2insights.org/2022/05/12/diversity-in-power/

Understanding values: Schwartz theory of basic values
By Shalom H. Schwartz
https://i2insights.org/2022/05/10/schwartz-theory-of-basic-values/

Understanding diversity primer: 3. Perceptions of good research
By Gabriele Bammer
https://i2insights.org/2022/05/05/diversity-in-good-research/

Five lessons to improve how models serve society
By Andrea Saltelli
https://i2insights.org/2022/05/03/improving-modelling/

Understanding diversity primer: 2. Mental models
By Gabriele Bammer
https://i2insights.org/2022/04/28/diversity-in-mental-models/

Three lessons for policy engagement
By Emily Hayter
https://i2insights.org/2022/04/26/lessons-for-policy-engagement/

Understanding diversity primer: 1. Why diversity?
By Gabriele Bammer
https://i2insights.org/2022/04/21/why-diversity/

Intentional ecology: Building values, advocacy and action into transdisciplinary environmental research
By Alexandra Knight and Catherine Allan
https://i2insights.org/2022/04/19/intentional-ecology/

Four building blocks of systems thinking
By Derek Cabrera and Laura Cabrera
https://i2insights.org/2022/04/12/dsrp-systems-thinking-building-blocks/

The MATRICx: Measuring motivation in science teams
By Gaetano Lotrecchiano
https://i2insights.org/2022/04/05/measuring-motivation-in-teams/

Place-based methodologies in transdisciplinary research
By Alexandra Crosby and Ilaria Vanni
https://i2insights.org/2022/03/29/place-based-methodologies/

Drawing lines between researcher and advocate?
By Alison Ritter
https://i2insights.org/2022/03/22/researcher-and-advocate/

Integrating context, formats and effects in transdisciplinary research
By tdAcademy 2021 GAIA paper authors
https://i2insights.org/2022/03/15/integrating-key-aspects-of-transdisciplinarity/

A collaborative vision and pathways for transforming academia
By The Care Operative and "Transforming Academia" workshop participants at 2021 International
Transdisciplinarity Conference
https://i2insights.org/2022/03/08/transforming-academia/

Can cultural hegemony explain resistance to transdisciplinarity?
By Livia Fritz, Ulli Vilsmaier and Dena Fam
https://i2insights.org/2022/03/01/cultural-hegemony-and-transdisciplinarity/

Basic steps for dealing with problematic value pluralism
By Bethany Laursen, Stephen Crowley and Chad Gonnerman
https://i2insights.org/2022/02/22/problematic-value-pluralism/

Judgment and decision making with unknown states and outcomes
By Michael Smithson
https://i2insights.org/2022/02/15/incomplete-sample-space/

How to systematically design transdisciplinary project evaluation
By Emilia Nagy and Martina Schäfer
https://i2insights.org/2022/02/08/evaluating-transdisciplinarity/

Enhancing mutual learning in developing a cross-disciplinary team
By Eric Shearer and Gemma Jiang
https://i2insights.org/2022/02/01/developing-cross-disciplinary-teams/

Implementing transdisciplinary research in post-Soviet Armenia and Georgia
By Tigran Keryan and Tamara Mitrofanenko
https://i2insights.org/2022/01/25/transdisciplinarity-in-post-soviet-countries/

Eleven success factors for transdisciplinary real-world labs
By Niko Schäpke, Oskar Marg, Matthias Bergmann, Franziska Stelzer and Daniel Lang
https://i2insights.org/2022/01/18/success-for-transdisciplinary-real-world-labs/

Overcoming the mismatch between goals and outcomes in knowledge exchange
By Denis Karcher and Chris Cvitanovic
https://i2insights.org/2022/01/11/research-impact-goals-and-outcomes/

i2S TALKS YOU TUBE CHANNEL

The following 15 videos have been added to the i2S YouTube channel so far in 2022.

Ideas and techniques for using team time effectively in convergence research teams
By Gemma Jiang
https://youtu.be/1QhKtTFzIXY
(Playlists: Intereach webinar series, and Team science).

Key issues for convergence research
By Christine Ogilvie Hendren, Gail Jones, Anna-Maria Marshall
https://youtu.be/dI1mdMohBMU
(Playlist: Intereach webinar series).

Bridging user experience (UX) and team science
By Stephanie Vasko
https://youtu.be/RZ8AcFsn3hQ
(Playlist: Intereach webinar series).

Ways of dealing with ignorance
By Michael Smithson
https://youtu.be/gZlk_MUvyuc
(Playlist: Understanding and managing unknowns).

Why we know less than we think we do
By Michael Smithson and Gabriele Bammer
https://youtu.be/GB2dkn2iFuc
(Playlist: Understanding and managing unknowns).

Effective thinking about ignorance
By Michael Smithson
https://youtu.be/izLSoupOGlU
(Playlist: Understanding and managing unknowns).

Where do good ideas come from - Part 1
By Michael Smithson
https://youtu.be/mqNiKd_Mpmw
(Playlist: Understanding and managing unknowns).

Where good ideas come from - Part 2
By Michael Smithson
https://youtu.be/mhVvFCcc2e4
(Playlist: Understanding and managing unknowns).

Manufacturing ignorance
By Michael Smithson
https://youtu.be/M3Y1oVRkQbg
(Playlist: Understanding and managing unknowns).

Creativity and unknowns – jazz
By Michael Smithson, John Mackay and Gabriele Bammer
https://youtu.be/oAZGh6zqHDU
(Playlist: Understanding and managing unknowns).

Creativity and unknowns – art
By Michael Smithson, Alexander (Sasha) Grishin and Gabriele Bammer
https://youtu.be/oIfIsRUAMlQ
(Playlist: Understanding and managing unknowns).

Art and science of adjourning
By Anne Heberger Marino, Hannah Love and Alyssa Stephens
https://youtu.be/4AuqShrJtWo
(Playlist: Intereach webinar series).

The art and science of changing organizational culture
By Ellen Fisher and Ellyn Dickmann
https://youtu.be/LVMkDFDy98M
(Playlist: Intereach webinar series).

Articulating the value and practice of science facilitation
By Megan Jones and Amanda Cravens
https://youtu.be/BnGpWjES9EU
(Playlists: Intereach webinar series, and Team science).

Creating conditions for compassionate and resilient community work
By Alyssa Stephens and Courtney Ngai
https://youtu.be/KI3WN_heHe0
(Playlists: Intereach webinar series, Team science, and Interdisciplinarity and Transdisciplinarity).

OTHER UPDATES

Two new videos by Gabriele Bammer about aspects of i2S are also available.

The first is a talk on "Integrating diversity" presented at the fifth SDG (Sustainable Development Goals) Conference Bergen which ran from 9-11 February 2022. A video of the talk and more information about the conference are available at https://www.uib.no/en/sdgconference/151242/programme-sdg-conference-bergen-2022-day-1-and-2. (The talk was presented on Day 2 (Friday) and starts around 28 minutes in.)

The second is a presentation in the MACH (Melbourne Academic Centre for Health) Implementation Science webinars, titled "A transdisciplinary approach to implementation", and was the second in the series held on September 1, 2021. A video of the talk and application of the i2S framework to a patient-centred model of preoperative assessment is available at https://machaustralia.org/resource/implementation/webinars/.

ABOUT i2S NEWS

The aim of this newsletter is to provide regular updates (4 times per year) about what's new in Integration and Implementation Sciences (i2S).

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 and repository: http://i2Insights.org
- i2S Talks YouTube channel: https://www.youtube.com/user/i2sTalks
- Twitter: @GabrieleBammer
- LinkedIn group "Global Network for Research Integration and Implementation": https://www.linkedin.com/groups/4888295/

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