I2S News

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Australian National University

WELCOME

Dear I2S News subscribers,

We are expanding the resources showcased in I2S News to include videos and digital posters from the First Global Conference on Research Integration and Implementation held in September 2013. The newsletter also provides an alternative to the LinkedIn group, the Global Network for Research Integration and Implementation, and reports on the major discussions in that group for those who do not want to join LinkedIn.

This will be the last newsletter for 2013. We wish you the best for the fast approaching Christmas break and a happy and fulfilling 2014!

Gabriele Bammer and Peter Deane

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FEATURED METHODS

Two Methods for Assessing Evidence to Underpin Policy and Practice Change: 1) Formulating and Testing Propositions; and 2) A Critique of Tools for Grading Evidence

Formulating and testing propositions:
Rodriguez, L., Walker, D., Maru, Y., and Wanjura, W. (2013). Learning from Agricultural Research for Development (AR4D) Programs in Sub-Saharan Africa, digital poster #752, from the *First Global Conference on Research Integration and Implementation*, Canberra, Australia, 8-11 September.

Details: As part of their project on 'Food System Innovation for Food Security', Rodriguez and colleagues argue that evidence can be divided into three categories: axioms, propositions and observations. These are defined as -
- "Axioms: (close to) self-evident truth;
- Propositions: proposals on best practice that have solid evidence base but remain contested
- Observations: things that stand out from review of evidence but where implications are unclear".

They also outline a process for describing and further assessing propositions. Propositions are presented in a two to four page format, divided into the following sub-sections:
- "Statement of the proposition: a single sentence statement of best practice about an aspect [of an intervention]
- Explanation: a single paragraph expansion on the proposition
- Evidence: summary data and references supporting the proposition derived from interviews about the projects analysed and documented material accessed
- Example/s: narrative from case study project [intervention] illustrating the proposition
- Consequences for the area under investigation [food security for this project]: hypothesised consequences of the proposition for [intervention] outcomes
- Project design considerations: implications of the proposition for project design in ... development interventions
- Assumptions and their implications: assumptions about causality, assumptions about strength of evidence, assumptions about scalability and context
- Counterviews and their implications: other experience suggesting different conclusions."

"Propositions can provide a concise and aggregated source of [intervention] information for consideration in project design and as a resource to promote discussion and learning. The aim of the propositions is to provide a platform for discussion and debate rather than a fixed set of lessons learned".

- Access to this digital poster can be obtained via the website of the First Global Conference on Research Integration and Implementation: http://www.i2sconference.org/. On the

website, access to digital posters is available via the green VIEW DIGITAL POSTERS button on the right menu.

A critique of tools for grading evidence:
Irving, M., Cherbuin, N., Eramudugolla, R., Butterworth, P., O'Donoghue Jenkins, L. and Anstey, K. (2013). Tools for Grading Evidence: Strengths, Weaknesses, and the Impact on Effective Knowledge Translation, digital poster #736, from the *First Global Conference on Research Integration and Implementation*, Canberra, Australia, 8-11 September.

Grading instruments can help policy decision makers evaluate research on a given topic. There are many grading instruments available to "...provide a metric to 'quantify' the quality of evidence from either an individual study or from a body of evidence". Their strengths are that they are systematic, time effective, accessible, objective and allow clear communication.

However, Irving et al (2013) also show how grading instruments can fail to adequately represent the quality of research, with problems including:
- "Lack of validation and poor reliability
- Highly subjective – low interrater reliability
- Create false sense of trust or over-reliance on grading outcomes
- Overly complicated, unclear instructions and little or no training – mistakes made
- Biased in favour of certain types of studies (eg., randomised control trials) and against others (eg., observational).
- Grading of evidence may not be applicable to local settings."

They cite an example from the group's own research on smoking as a risk factor for Alzheimer's Disease, where observational research findings were rated poorly even though randomised controlled trials would have been unethical. Irving and colleagues conclude that greater awareness of short-comings is needed, along with critical evaluation of scores, and argue for better matching of grading instruments with particular types of evidence, along with the development of improved methods.

Focused Dialogue
Newell, B. (2012). Simple Models, Powerful Ideas: Towards Effective Integrative Practice. *Global Environmental Change,* **22**, 3: 776-783. Full text online at: http://dx.doi.org/10.1016/j.gloenvcha.2012.03.006 (viewed November 2013).

Newell describes a process of knowledge synthesis called focused dialogue. Focused dialogue is the collaborative construction of powerful ideas. These ideas are essentially simple, generic and fundamental concepts which, once developed between people, can serve to build the shared understanding essential for effective communication and successful integration. Developing focused dialogue involves three steps:
- identifying "the terms that will play a key role in the group's discussions. These terms label concepts that are potential elements of a shared theoretical framework." Of particular interest

are "nexus concepts", which are common to a number of disciplines, but given different names in those disciplines, which can hide the fact that the concept is shared.
- identifying and analysing the metaphors that individual group members use to understand each of the key terms. Analysis involves interrogating the metaphors and terms, with questions like: How effective is the metaphor as a means of communication across disciplinary and sectoral boundaries? Which of the metaphors are the most powerful (simple yet generic)?"
- working together "to construct a shared conceptual framework that embodies the selected metaphors". The groups also tests "the usefulness of the framework as a foundation for research design and modelling."

These three steps are iterated to evolve the conceptual framework over time.

The "conceptual framework in use at any specific time is limited and provisional".

For more methods, such as
- Writing for Change: An Interactive Guide to Effective Writing, Writing for Science, and Writing for Advocacy

See: http://i2s.anu.edu.au/resources/tools

FEATURED VIDEO

Interdisciplinarity Then, Now, and Into Networked Futures (Julie Thompson Klein)

"Interdisciplinarity is nearing its 100th anniversary, dating from the earliest documented uses of the term in the early 20th century. This overview identifies major developments over a century of work in an expanding variety of contexts, the communities of practices that emerged, and current trendlines. It then weighs implications of common keywords across movements, including 'system', 'complexity', 'team', 'management', and 'integration'. At a time of declining resources, it is all the more crucial that networking occurs across established and newer communities of practice. Cooperation and collaboration are key to establishing a global knowledge base that respects both shared needs and particularities of context common while crafting more integrative relationships of research and education, problem solving and critique".

- Access to this video can be obtained via the website of the First Global Conference on Research Integration and Implementation: http://www.i2sconference.org/ (on the website the on-demand video of this talk is available by clicking the purple ON-DEMAND VIDEO button on the right menu - a simple sign-up is required to view the video material).

WHAT'S FEATURED ON THE LINKEDIN GROUP

Discussions that are currently active on the LinkedIn group: Global Network for Research Integration and Implementation are "What are the determining functions that distinguish

between 'transdisciplinary' and 'interdisciplinary'?" initiated by Suzanne Parsel and post-conference reflections and evaluation.

You do not have to be a LinkedIn member to read the discussions. If you would like to contribute, but not join LinkedIn, send your comments to i2s@anu.edu.au and we'd be happy to post them for you.

What are the Determining Functions that Distinguish Between "Transdisciplinary" and "Interdisciplinary"?

Suzanne Parsel writes: Defining how different disciplines or domains of knowledge interact as "transdisciplinary" vs "interdisciplinary" is really not helpful to get to a place where a term can be used consistently by all. What matters are the determining functions and their associated outcomes. Functions and associated outcomes have the capacity to create a unified concepts that can be in turn linked to a term. We can define the surface terms as "purple", "green", or "magenta"--it doesn't matter. What matters is what are underlying concepts. Can we focus on defining the functionality which leads to different outcomes, and in turn distinguish the different types of interactions between disciplines?

The discussion has elicited 10 comments to date.

Post-Conference Reflections and Evaluation

Gabriele Bammer has made the following posts, which have elicited more than 15 comments:
- Post-conference reflections:
  - Reflection #1 – reporting on the success of the conference in bringing together a number of the key research communities that tackle complex real-world problems, using systems-based, action-oriented, inter- and trans-disciplinary methods
  - Reflection #2 - free videos from the conference are now available
  - Reflection #3 - maintaining the conference and LinkedIn network
- Evaluation reports on the conference
  - Report #1: Attendance and overall impressions of conference
  - Evaluation Report #2: Reasons for attending plus post-conference activities, including an on-going network

Two final evaluation reports will be posted in coming weeks.

FEATURED JOURNAL

Action Learning: Research and Practice

Action Learning: Research & Practice publishes "articles which advance knowledge and assist the development of practice through the processes of action learning". Articles are focused on the creation of theory, as "grounded in empirical observation of data and experience that widens understanding of action learning and research in professional and organisational settings". The journal as a whole aims to help practitioners "gain new insights into their work and help them improve their

effectiveness and contribution to their clients and the wider community". The journal aims to cross the "conventional boundaries of professions, organisations and communities". Wide ranging debate is encouraged, with reader responses and alternative views being published.

- Website: http://www.tandfonline.com/loi/calr20 (viewed: November 2013).
- Impact factor: N/A

Call for Abstracts: Special Issue of Futures – Transdisciplinarity Revisited

The focus for the special issue is to "address the underlying assumptions, the values and ideals commonly associated with implementing transdisciplinarity", along with exploring the limitations of transdisciplinarity. Articles for the special issue can address one of the following key topics:

- Developments in transdisciplinary education, research or practice
- Alternative futures of transdisciplinary contributions
- Innovative conceptual frameworks
- Transdisciplinary research in future studies
- Improved implementation of transdisciplinary education, research and practice.

- Special issue details: http://www.journals.elsevier.com/futures/call-for-papers/special-issue-transdisciplinarity-revisited/ (viewed: November 2013).
- Journal homepage: http://www.journals.elsevier.com/futures (viewed: November 2013).
- Important dates:
  - December 15, 2013: Abstracts due
  - April 1, 2014: Full papers due
  - July 30, 2014: Special issue online access granted

Call for Papers for the Journal of Translational Medicine and Epidemiology - Special Issue: Collaboration Science and Translational Medicine

"This special issue is focused on the intersection of 'Collaboration Science and Translational Medicine'. The issue strives to bring together insights including but not restricted to collaboration science, its impact on translational medicine, the education of clinical and scientific translational professionals, case studies and research on translational healthcare teams, comparative and cross disciplinary perspectives on conducting translational science, ethical considerations of collaboration, self-assessment of collaborative functioning within translational medicine projects, leadership and team capacity in translational medicine, and cross sectoral considerations as well as other related topics".

- Special issue details: http://www.jscimedcentral.com/TranslationalMedicine/specialissue.php# (viewed: November 2013).
- Journal homepage: http://www.jscimedcentral.com/TranslationalMedicine/index.php (viewed: November 2013).
- Important dates:
  - March 29, 2014: Submission deadline

For more journals, such as

- Project Management
- Technological Forecasting and Social Change: An International Journal

See: http://i2s.anu.edu.au/resources/journals

Society of Risk Analysis

Details: ""The Society for Risk Analysis is a multidisciplinary, interdisciplinary, scholarly, international society that provides an open forum for all those who are interested in risk analysis. Risk analysis is broadly defined to include risk assessment, risk characterization, risk communication, risk management, and policy relating to risk, in the context of risks of concern to individuals, to public- and private-sector organizations, and to society at a local, regional, national, or global level.

The SRA aims to:
1. Bring together individuals from diverse disciplines and from different countries and provide them opportunities to exchange information, ideas, and methodologies for risk analysis and risk problem solving;
2. Foster understanding and professional collaboration among individuals and organizations for the purpose of contributing to risk analysis and risk problem solving;
3. Facilitate the dissemination of knowledge about risk and risk methods and their applications;
4. Encourage applications of risk analysis methods;
5. Promote advancement of the state-of-the-art in research and education on risk analysis; and
6. Provide services to its members to assist them in developing their careers in risk analysis.

[The society] includes numerous regional organizations around the world that provide opportunities for members to interact with other risk analysts near to their homes. SRA also includes many specialty groups for members to interact with risk analysts in their disciplines. A students and young professionals group is devoted to supporting students and recent graduates with an interest in risk analysis."

- Website: http://www.sra.org/ (viewed: November 2013).

For more professional associations & networks, such as
- Innovations for Scaling Impact (iScale)

See: http://i2s.anu.edu.au/resources/associations_networks

32nd International Conference of the System Dynamics Society: Good Governance in a Complex World

"The annual System Dynamics conference brings together people from around the world to share important research and application results and to build the community of those active in the field. The conference theme is "Good governance in a complex world." Decision making by government, business, and the public is increasingly interdependent. In this conference [the aim is] to address the

role of models in governance in the public and private sectors, typically involving a diversity of domains, disciplines, organizations, stakeholders, policies, and goals.

The conference will be held in Delft, The Netherlands from 20-24 July 2014.

- Website: http://conference.systemdynamics.org/ (viewed: November 2013).
- Important dates:
  - February 3, 2014: Opening date for paper submissions, workshop and session proposals
  - March 18, 2014: Deadline for paper submissions

Project Management Institute (PMI) Research and Education Conference: Standing on the Shoulders of Giants - In Search of Theory and Evidence

"The PMI Research and Education Conference is a biennial international project management research and education event that brings together scholars, senior practitioners and students of project management and allied disciplines. The conference provides an opportunity to present and discuss new project management research findings and teaching methods.

The theme of the forthcoming Research and Education Conference reflects three key issues facing the field of project management research and education. The first concerns how research and education can 'stand on the shoulders of giants' – enabling us to see further and with greater insight because of the knowledge platform that is being built. The second is the role of theory and whether the field has moved on from Koskela and Howell's (2002) provocation, that there is no underlying theory of project management. Finally, the opportunity of evidence-based project management was highlighted at the 2012 Research and Education Conference in Professor Denise Rousseau's (2012) keynote address. How will the field respond to this call?"

The conference will be held in Portland, Oregon, United States of America from 27-29 July 2014.

- Website: http://www.pmi.org/Knowledge-Center/Academic-Research/research-conference.aspx (viewed: November 2013).
- Important dates:
  - January 13, 2014: Abstracts due

Other Upcoming Conferences

Conferences which have not been listed in previous newsletters are marked [NEW].

Systems, Modelling and Simulation
- 4-6 December 2013, 4th International Conference on Complex Systems Design and Management, Paris, France (http://www.csdm2013.csdm.fr/)
- 8-11 December 2013, Winter Simulation Conference: Making Decisions in a Complex World, Washington D.C., United States of America (http://wintersim.org/)

- 6-9 January **2014**, 47th Hawaii International Conference on System Sciences (HICSS 47), Hawai'i Island, United States of America (http://www.hicss.hawaii.edu/hicss_47/apahome47.htm)
- [NEW] 22-24 February **2014**, 1st Asia-Pacific System Dynamics Conference of the Systems Dynamics Society, Tokyo, Japan (http://anzsys.org/index.php/component/content/article/44-calls/conference-papers/124-cfp-1apac-sd-conf)
- 1-2 April **2014**, 7th Simulation Workshop (SW14), Worcestershire, United Kingdom (http://www.theorsociety.com/Pages/Conferences/SW14/SW14.aspx)
- [NEW] 1-4 April **2014**, GameDays 2014: International Conference on Serious Games, Darmstadt, Germany (http://www.gamedays2014.de/)
- 13-16 April **2014**, Symposium on Theory of Modeling and Simulation, Tampa, United States of America (http://www.ipmu2014.univ-montp2.fr/)
- 22-25 April **2014**, European Meeting on Cybernetics and Systems Research (EMCSR): Civilisation at the Crossroads:- Response and Responsibility of the Systems Sciences, Vienna, Austria (http://www.emcsr.net/call-for-symposia-2014/)
- 27-30 May **2014**, 28th European Conference on Modelling and Simulation (ECMS 2014), Cancun, Mexico (http://www.scs-europe.net/conf/ecms2014/index.html)
- 27-30 May **2014**, Conference of the American Society for Cybernetics: Living in Change, Washington D.C., United States of America (http://asc-cybernetics.org/2014/)
- 7-10 June **2014**, 7th Chaotic Modeling and Simulation International Conference, Lisbon, Portugal (http://www.cmsim.org/chaos2014.html)
- [NEW] 9-13 June 2014, 9th Annual Systems of Systems Engineering Conference: The Socio-technical Perspective, Adelaide, Australia (http://sosengineering.org/2014/)
- 23-25 June **2014**, Nostradamus 2014: International Conference on Prediction, Modeling and Analysis of Complex Systems, Ostrava, Czech Republic (http://nostradamus-conference.org/Home.html)
- [NEW] 30 June - 3 July **2014**, International Council on Systems Engineering (INCOSE) International Symposium, Las Vegas, United States of America (http://www.incose.org/symp2014/)
- 7-11 July **2014**, 22nd Conference on User Modeling, Adaptation and Personalization, Aalborg, Denmark (http://www.um.org/umap2014/)
- 20-24 July **2014**, 32nd International Conference of the System Dynamics Society: Good Governance in a Complex World, Delft, The Netherlands (http://conference.systemdynamics.org/)
- 27 July-1 August **2014**, 58th Meeting of the International Society for the Systems Sciences: Learning Across Boundaries: Exploring the Variety of Systemic Theory and Practice, New York, United States of America (http://isss.org/world/isss-2014-announcement)
- 1-5 September **2014**, 10th Conference of the European Social Simulation Association, Barcelona, Spain (http://www.essa2014.org/)

Team Science and Project Management
- 30-31 January **2014**, 19th Coalition Theory Network Workshop, Brussels, Belgium (http://www.feem.it/getpage.aspx?id=5672&sez=Events&padre=79)
- 4-7 July **2014**, International Association for Conflict Management 2014 Conference, Leiden, The Netherlands (http://www.iacm-conflict.org/)

- 17-19 July **2014**, 9th Annual INGRoup Conference, Raleigh, United States of America (http://www.ingroup.net/conference.html)
- 27-29 July **2014**, Project Management Institute (PMI) Research and Education Conference: Standing on the Shoulders of Giants - In Search of Theory and Evidence, Portland, United States of America (http://www.pmi.org/Knowledge-Center/Academic-Research/research-conference.aspx)

Uncertainty, Risk and Decision Making
- 8-11 December 2013, Society for Risk Analysis Annual Meeting: Risk Analysis for Better Policies, Baltimore, USA (http://sra.org/events/sra-2013-annual-meeting)
- 20-21 March **2014**, Risk, Perception, and Response Conference, Boston, USA (http://www.hsph.harvard.edu/hcra/risk-perception-and-response-conference/)
- 16-18 June **2014**, 23rd Annual Conference of the Society for Risk Analysis Europe: Analysis and Governance of Risks Beyond Boundaries, Istanbul, Turkey (http://www.sraeurope.org/home.aspx?pag=1252)
- 13-19 July **2014**, Thematic Group on Sociology of Risk and Uncertainty (TG04) at the XVIII International Sociological Association (ISA) World Congress of Sociology: Facing an Unequal World - Challenges for Global Sociology, Yokohama, Japan (http://www.isa-sociology.org/congress2014/tg/tg.php?n=TG04)
- 14-18 July **2014**, 12th World Meeting of the International Society for Bayesian Analysis, Cancun, Mexico (http://isba2014.eventos.cimat.mx/)
- 15-19 July **2014**, 15th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, Montpellier, France (http://www.ipmu2014.univ-montp2.fr/)
- [NEW] 7-10 December **2014**, Society for Risk Analysis 2014 Annual Meeting, Denver, United States of America (http://www.sra.org/events/sra-2014-annual-meeting)

Bridging the Gap from Research to Policy and Practice
- 17-18 September **2014**, 2nd Biennial Australian Implementation Conference: Solving Complex Implementation Problems, Sydney, Australia (http://www.ausimplementationconference.net.au/)

Other (including Sustainability Science)
- 4-6 December 2013, 27th Australian and New Zealand Academy of Management (ANZAM) Conference: Managing on the Edge, Hobart, Australia (http://www.anzamconference.org/)
- 6-7 February **2014**, 10th International Conference on Technology, Knowledge and Society, Madrid, Spain (http://techandsoc.com/the-conference/call-for-papers)
- [NEW] 19-21 February **2014**, Sustainable Development Symposium 2014: 4th Annual European Postgraduate Symposium, Bratislava, Slovakia (http://www.sustainability.sk/aim-topics/)
- 15-17 April **2014**, Geneva Health Forum - Global Health: Interconnected Challenges, Integrated Solutions, Geneva, Switzerland (http://ghf.globalhealthforum.net/)
- [NEW] 24-27 April **2014**, 6th International Conference for the Humanities, Arts, Science, and Technology Alliance and Collaboratory (HASTAC): Hemispheric Pathways - Critical Makers in International Networks, Lima, Peru (http://hastac2014.org/)

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- 30 April-1 May **2014**, 13th Community-Campus Partnerships for Health (CCPH) International Conference: Achieving Authentic, Equitable & Transformative Partnerships, Chicago, United States of America (http://depts.washington.edu/ccph/conf14-overview.html)
- 4-8 May **2014**, 3rd International Science and Policy Conference on the Resilience of Social and Ecological Systems, Montpellier, France, (http://www.resilience2014.org/)
- [NEW] 5-6 May **2014**, Science and Technology Studies Conference 2014: Critical Issues in Science and Technology Studies, Graz, Austria (http://www.ifz.tugraz.at/ias/IAS-STS/Upcoming-Activities/STS-Conference-Graz-2014)
- 8-13 June **2014**, 20th International Symposium on Society and Resource Management (ISSRM): Challenges of Urban and Rural Transformation, Hannover, Germany (http://www.issrm2014.iasnr.org/)
- 11-13 June **2014**, 9th International Conference on Interdisciplinary Social Sciences, Vancouver, Canada (http://thesocialsciences.com/the-conference/call-for-papers)
- 18-20 June **2014**, 20th Annual International Sustainable Development Research Conference (ISDRC20): Just Transitions, Trondheim, Norway (http://isdrs.org/2014-norway/)
- 26-28 June **2014**, The 3rd International Conference on Transdisciplinary Imaging at the Intersections of Art, Science and Culture: Cloud and Molecular Aesthetics, Istanbul, Turkey (http://blogs.unsw.edu.au/tiic/)
- 11-13 July **2014**, World Future 2014: What If, Orlando, United States of America (http://www.wfs.org/worldfuture-2014-what-if)
- [NEW] 16-20 July **2014**, Society for Values in Higher Education (SVHE) 2014 Conference: Minding the Gap – Educating for Economic Justice, Minneapolis-St Paul, United States of America (http://www.svhe.org/calendar.html)
- 4-5 August **2014**, 14th International Conference on Knowledge, Culture, and Change in Organizations, Oxford, United Kingdom (http://ontheorganization.com/the-conference/call-for-papers/2014-call-for-papers)
- [NEW] 9-12 October **2014**, 28th Annual Conference for the Society for Literature, Science and the Arts: Fluid, Dallas, Texas (http://litsciarts.org/slsa14/)
- [NEW] 22-25 October **2014**, XX International Conference of the Society for Human Ecology: Ecological Responsibility and Human Imagination - Saving the Past~Shaping the Future, Bar Harbor, United States of America (http://www.sustainability.sk/aim-topics/)

ABOUT I2S NEWS

The aim of this newsletter is to provide regular (bi-monthly) updates about resources 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 concepts, methods and case studies relevant to I2S - either a useful compilation or a single example of note. We also provide information about journals, professional associations & networks, courses and conferences where researchers can learn from others, report their methodological findings and interact with like-minded peers. The newsletter also reports on discussions in the LinkedIn group "Global Network for Research Integration and Implementation": http://www.linkedin.com/groups/Global-Network-Research-Integration-Implementation-4888295.

I2S News is archived at: http://i2s.anu.edu.au/i2s-publications/newsletters/i2s-news.

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