



HAL
open science

”Enabling conditions for inter-and trans-disciplinary integration: Commonalities and differences across geographical regions”

Sabine Hoffmann, Lisa Deutsch, Jan Streit, Benjamin D Hoffmann, Julie Thompson, Christian Pohl, Kristine Glauber, Christine Ogilvie Hendren, Pips Veazey, Kristine Lund, et al.

► To cite this version:

Sabine Hoffmann, Lisa Deutsch, Jan Streit, Benjamin D Hoffmann, Julie Thompson, et al.. ”Enabling conditions for inter-and trans-disciplinary integration: Commonalities and differences across geographical regions”. International Transdisciplinarity Conference (ITD) 2021, Sep 2021, Zurich, France. hal-03915552

HAL Id: hal-03915552

<https://hal.science/hal-03915552>

Submitted on 29 Dec 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L’archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

International Transdisciplinarity Conference (ITD) 2021

Pre-Crafted Contributions and Real-Time Workshop:

“Enabling conditions for inter- and trans-disciplinary integration: Commonalities and differences across geographical regions”

Friday, 17 Sept 2021, 3.30 – 5.00 pm (Swiss time)

Conveners

Sabine Hoffmann^{1,2}, Lisa Deutsch^{1,3}, Jan Streit^{1,3}, Benjamin Hofmann¹, Julie Thompson Klein^{2,4}, Christian Pohl², Kristine Glauber⁵, Christine Ogilvie Hendren⁶, Pips Veazey⁷, Kristine Lund⁸ and Carmenza Robledo²

¹ Eawag, Swiss Federal Institute of Aquatic Science and Technology, Ueberlandstrasse 133, 8600, Duebendorf, Switzerland

² TdLab, Department of Environmental Systems Science, ETH Zurich, Universitätsstrasse 16, 8006 Zuerich, Switzerland

³ Institute for Environmental Decisions, ETH Zurich, Universitätsstrasse 16, 8092 Zurich, Switzerland

⁴ Department of English, Wayne State University, 5057 Woodward, Detroit, MI 48202, USA

⁵ Clinical & Translational Science Institute, Duke University, 701 W Main St, Durham, NC 27701, USA

⁶ Research Institute for Environment, Energy and Economics, Appalachian State University, 401 Academy Street, 234 IG Greer Hall, Boone, NC 28608, USA

⁷ University of Alaska Fairbanks, Alaska EPSCoR, West Ridge Research Building, Fairbanks, AK 99775-7010 USA

⁸ ICAR Research lab, CNRS, Ecole Normale Supérieure de Lyon, 15, parvis René Descartes, 69630 Lyon, France

Keywords

integration, enabling conditions, researchers, leaders, funders, cross-regional dialogue

Abstract

Although integration is often considered critical to success or failure of inter- and trans-disciplinary (ITD) research projects or programs (Defila et al., 2006; O'Rourke et al., 2016), widespread consensus on what integration actually means is lacking (O'Rourke et al., 2019; Pohl et al., 2021). We treat integration as a process of combining a wide range of perspectives not only from different disciplines (interdisciplinary integration), but also from research, policy, and practice (transdisciplinary integration) in order to advance fundamental understanding of complex societal problems, and to formulate 'socially robust' solutions (Hoffmann et al., 2017a). We likewise refer to integration as the result or output that emerges from this process (O'Rourke et al., 2016). Following O'Rourke et al. (2019) and Pohl et al. (2021), integration occurs at different phases of an ideal-typical ITD research process and yields different types of integration in different contexts depending among others on the specific purpose, scale and scope of ITD projects or programs (Klein, 2008). Finally, we distinguish knowledge elaboration from knowledge regulation (Lund, 2019).

We argue that integration does not happen automatically, but needs to be proactively led to ensure research projects or programs live up their ITD ambition (Hoffmann et al., 2017b; Deutsch et al., 2021). We also posit that leading integration does not take place in a vacuum (Brundiers et al., 2013), but requires conditions enabling integration. This contribution explores what kind of enabling conditions project or program leaders and researchers need—and create—to leverage integration. It draws lessons from a variety of cases across various geographical regions, specifically Latin America, US/Canada, Africa and Europe, in addition to insights across different professional communities engaged in ITD research, including Science of Team Science (SciTS), Action Research (AR), Integration and Implementation Science (I2S), and Association for Interdisciplinary Studies (AIS).

By drawing lessons across these communities, this contribution will provide key insights to the conference streams of “Integrative TD” and “Institutionalizing and funding TD” and address two main questions: (a) What kind of conditions do project or program leaders and researchers need—and create—to enable ITD integration in different regions? and (b) How do these conditions impact, both positively and negatively, integration in these regions and how? The contribution will build on three previous workshops at the ITD 2019¹, SciTS 2020² and SciTS 2021³. The results will inform the working group on “Integration Experts and Expertise” to be established under the auspice of the newly founded ITD Alliance aimed at advancing ITD research and education.

The conveners note that a number of assumptions are embedded in the workshop design, including, for example, that workshop attendees have a clear idea of what “integration” means. We acknowledge that these assumptions could itself fill a workshop if interrogated thoroughly. It is our intent to avoid definitional derailment. We will therefore encourage participants to follow their individual understandings and focus our efforts to derive enabling or hindering conditions from participants’ shared experiences.

Envisioned Goals

- Create a space for project or program leaders, researchers, and funders from different communities and regions to share their experiences;
- Identify conditions enabling or hindering integration by drawing on a variety of cases;
- Discuss positive and/or negative impacts of such conditions on integration.

Expected Outcomes

We expect all participants will be engaged or interested in exploring enabling or hindering conditions for integration, while having diverse motivations for participating. For example, participants may have different levels and kinds of expertise and experience, leading or funding ITD research from novices to experts. Others may have different roles regarding integration, from project or program leaders, researchers, and funders to advisors. Our workshop design will account for this diversity, described further below, while allowing participants to gain the following outcomes:

- Exchanging and networking across regions and communities;
- Documenting commonalities and differences across regions and communities.

Intended target audiences

The target audiences include project or program leaders, researchers, and funders from different scientific communities (e.g. ITD, SciTS, AR, i2S, AIS) and geographical regions (e.g. Latin America, US/Canada, Africa, and Europe) committed to leveraging integration. To reach the intended audience and accommodate various times zones, the workshop will occur in off-peak conference hours, preferably i.e. between 6-9 pm Swiss time, in English, French, and Spanish. Maximum number of participants: 40.

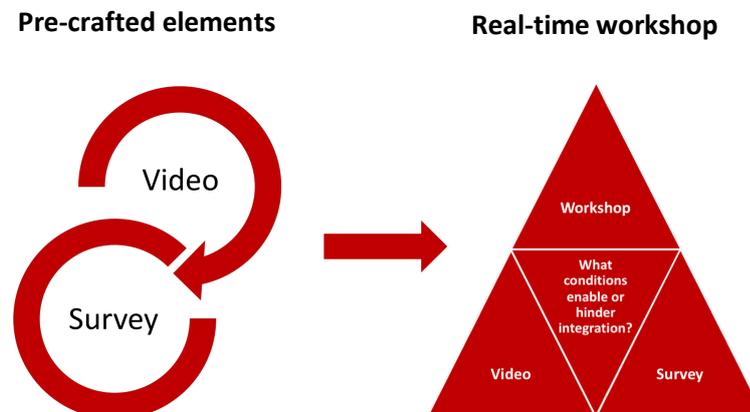
¹ “Is there a new profession of integration experts on the rise?” (ITD 2019, Gothenburg, Sweden)

² “Global efforts in developing and promoting a new profession of integration experts and expertise in inter- and transdisciplinary collaborative research” (SciTS 2020, Durham, NC, USA)

³ “Cross-academic community reflection on expertise in the emerging profession of Integration Expert and Interdisciplinary Executive Scientist.” (SciTS 2021, Arlington, VA, USA)

Structure and Design

The present contribution will include both pre-crafted elements as well as a real-time workshop:



Pre-crafted elements

1. Video calling for establishing academic careers for integration experts (Hoffmann et al., subm.)
2. Survey collecting experiences on conditions enabling or hindering integration

Real-time 90-minute workshop

We envision employing a 'think-pair-share' method to share experiences on conditions enabling or hindering integration across different communities and regions:

- 10 min: Introduction (welcome, framing and setting the stage, presenting survey results)
- 5 min: Individual reflections based on two guiding questions (the basis for subsequent think-pair-share exercises)
 - ⇒ Guiding Question 1: Think of a project or program in terms of ITD integration. What kind of conditions were crucial for integration within the project or program?
 - ⇒ Guiding Question 2: How did these conditions impact positively or negatively integration?
- 15 min: Breakout rooms in quads from the same region (e.g. Latin America, US/Canada, Africa, Europe) to share results of individual reflections and other anecdotal experiences;
- 25 min: Organization of quads into larger groups of 8 participants from different regions. Groups will share commonalities and differences identified in quads and derive lessons from them;
- 30 min: Report back from groups (3 min each) in plenary session to share key points of commonalities and differences, and identify conditions enabling or hindering integration.
- 5 min: Wrap up (conclusions, next steps).

Outputs

The conveners will summarize results in a workshop brief for leaders, researchers, and funders of ITD research and/or publish them in a scientific journal.

References

- BRUNDIERS, K., WIEK, A. & KAY, B. 2013. The Role of Transacademic Interface Managers in Transformational Sustainability Research and Education. *Sustainability*, 5, 4614-4636.
- DEFILA, R., DI GIULIO, A. & SCHEUERMANN, M. 2006. *Forschungsverbundmanagement. Handbuch für die Gestaltung inter- und transdisziplinärer Projekte*, Zürich, vdf Hochschulverlag.
- DEUTSCH, L., BELCHER, B. M., CLAUS, R. & HOFFMANN, S. 2021. Leading inter- and transdisciplinary research: Lessons from applying theories of change to a strategic research program. *Environmental Science & Policy*, 120, 29-41.
- HOFFMANN, S., DEUTSCH, L., KLEIN, J. T. & O'ROURKE, M. subm. Integrate the Integrators! A call for establishing academic careers for integration experts. *Humanities & Social Sciences Communications*.
- HOFFMANN, S., POHL, C. & HERING, J. G. 2017a. Exploring transdisciplinary integration within a large research program: Empirical lessons from four thematic synthesis processes. *Research Policy*, 46, 678-692.
- HOFFMANN, S., POHL, C. & HERING, J. G. 2017b. Methods and procedures of transdisciplinary knowledge integration: empirical insights from four thematic synthesis processes. *Ecology and Society*, 22, 27.
- KLEIN, J. T. 2008. Integration in der inter- und transdisziplinären Forschung. In: BERGMANN, M. & SCHRAMM, E. (eds.) *Transdisziplinäre Forschung. Integrative Forschungsprozesse verstehen und bewerten*. Frankfurt, New York: Campus Verlag.
- LUND, K. 2019. Building and regulating cognitive, linguistic, and interactional aspects of knowledge between the individual and the group. *Computers in Human Behavior*, 100, 370-383.
- O'ROURKE, M., CROWLEY, S. & GONNERMAN, C. 2016. On the nature of cross-disciplinary integration: A philosophical framework. *Stud Hist Philos Biol Biomed Sci*, 56, 62-70.
- O'ROURKE, M., CROWLEY, S., LAURSEN, B., ROBINSON, B. & VASKO, S. E. 2019. Disciplinary diversity in teams: Integrative approaches from unidisciplinarity to transdisciplinarity. In: HALL, K. L., VOGEL, A. L. & CROYLE, R. T. (eds.) *Strategies for Team Science Success*. Cham: Springer.
- POHL, C., KLEIN, J. T., HOFFMANN, S., MITCHELL, C. & FAM, D. 2021. Conceptualising transdisciplinary integration as a multidimensional interactive process. *Environmental Science & Policy*, 118, 18-26.