A Tour d’Horizon of Literature Related to Transdisciplinarity Published in 2014

The number of publications in the field of inter- and transdisciplinary research has been steadily growing during recent years (http://www.transdisciplinarity.ch/e/Bibliography/Publikationstrend_itd.php).

In order to give an overview the td-net invites experts of transdisciplinary research every year to inform us about important recent publications in the area of transdisciplinarity (see list of contributors). In this document we present new literature published in 2014 with short annotations written by the experts that recommended the publications.

We would like to thank the contributors for their inputs and are looking forward to another productive year for transdisciplinary research.

"Tour d'horizon" literature lists from previous years can be found here http://www.transdisciplinarity.ch/e/Bibliography/new.php

More information about transdisciplinary literature is available from the "bibliography transdisciplinarity" at http://www.transdisciplinarity.ch/e/Bibliography/

The content is interacitve and the biographical data is hyperlinked with the matching website.

Categories

General overviews 2
Concepts of inter- and transdisciplinarity 2
Problem framing 3
Problem orientation of research 3
Participation 4
Knowledge exchange 4
Inter- and transdisciplinary research methods 5
Education for inter- and transdisciplinary research 5
Biographies of TD researchers 5
Team science 6
Perspectives from the arts and design 6
Transdisciplinarity in action: projects and case studies 6
Environmental humanities 7
Sustainability science 8
Risk 8
Information technology 8
Psychology 8
Contributors 9
General overviews


"Designed to inform both teaching and research, this innovative book covers the spectrum of interdisciplinary activity, offering a timely emphasis on collaborative interdisciplinary work." (fd)

"Enhancing Communication and Collaboration in Interdisciplinary Research collects 18 original chapters that address a wide range of challenges confronting interdisciplinary researchers from a variety of perspectives. Including contributions by leaders in the fields of interdisciplinary and transdisciplinary research and practice, the book offers insights and enhancements in the form of case studies, practical tools, contextual applications, and theoretical frameworks." (rf)

"The book explores strategies for addressing each of the two key barriers to cross-disciplinary communication: differences in the meanings attached to terminology, and differences in philosophical/methodological perspective. The individual chapters were presented at a conference held in 2011, and have been extensively revised." (rs)


"The long-awaited intro text which serves as a companion volume for the second edition of *Interdisciplinary Research: Process and Theory*." (wn)

"This book is written with a view to the practice of interdisciplinary work and the scholarly debate on interdisciplinary work at the same time. It is comprehensive as well as simple without simplifying, and although it addresses students it is interesting for all those doing interdisciplinary work." (rd)

Concepts of inter- and transdisciplinarity


"This article offers an excellent analysis of the central role of serendipity (novel connections drawn between previously disparate concepts, methods) in interdisciplinary research." (ds)

"Interdisciplinary research can be defined as the practice of discovering new objects of knowledge beyond disciplinary borders. The aim of this article is to take stock of the theoretical and methodological issues involved in the interdisciplinary research process from the perspective of serendipity, which is a creative process of considerable value to science." (fd)


"This book offers a new paradigm of reality, based on the interaction between science, culture, spirituality, religion, and society. Basarab Nicolescu heralds a new era, cosmodernity, in which reality is plastic and its people are active participants in the cosmos, and the world is simultaneously knowable and unknowable. The author notes a new spirituality free of dogmas and looks at quantum physics, literature, theater, and art to reveal the emergence of a newer, cosmodern consciousness." (bn)


"The paper outlines a perspectivist (constructivist) understanding of interdisciplinarity, and discusses how interdisciplinary research should be pursued. It is accompanied by commentaries by Rick Szostak, Bernard Callebaut, Steve Fuller, Michael HG Hoffman, and Robert Drury King, and a response by the authors." (rs)
"In this special issue, Basarab Nicolescu recommends a methodology for transdisciplinarity. Other authors discuss how one becomes a transdisciplinary scholar, conceptual change, and transdisciplinary leadership." (rs)


"I recommend both articles (Pohl’s article is a direct response to Ukowitz’ contribution) because they demonstrate why transdisciplinary research needs a theoretical foundation and how this can be achieved. Besides, they briefly summarize the current state of research on a theory of transdisciplinarity." (us)

Problem framing

"This paper provides guidance to researchers for identifying an adequate conception of sustainable development to refer to in a specific project. It draws on an in-depth qualitative empirical analysis of how researchers deal with the issue as well as on philosophically well-grounded general requirements for appropriate sustainability conceptions. The guidelines can be adapted to transdisciplinary research projects that refer to other normative societal concerns." (gw)

Problem orientation of research

"Inter- and transdisciplinary research is oriented towards societal problems. This publication provides insights into the challenges connected with this approach. The researchers leave the secure terrain of academic disciplines. Their expertise is relativized, methodological unknown territory is pioneered.
Based on thirty years of experience the contributions focus on research practice and reflect how projects start, proceed and end. The volume closes a gap in German speaking literature and gives orientation as to how inter- and transdisciplinary project teams can work successfully." (kh)

"This special issue seeks to offer a critical and constructive contribution to the many debates on transdisciplinary problem solving by drawing on the particular experience of researchers within the German Helmholtz Association (HA) and its numerous partners all over the world. This experience is especially useful given that the Helmholtz Association is not only Germany’s largest scientific research organization (with Max Planck in second place) but, unlike basic research oriented institutions (most universities), its official mission is to solve the grand challenges of society, science, and industry by means of research conducted in so called problem-oriented strategic programs. The articles in this issue cover topics ranging from the management of contaminated sites, local knowledge within biodiversity research, and water resources management." (mg)
Participation


"An example of radical co-production of knowledge standing on the last step of Arnstein’s (1969) ladder of participation (citizen control). The project is about how to improve the Benin oil palm seed system. The societal actors decide amongst others where to have the test fields and what to seen as an adequate measure of growth/success." (cp)


"This book is the first comprehensive analysis of quality and evaluation standards and their empirical operationalization for participatory projects and programs. It combines sociological, psychological, economic and statistical insights into a truly interdisciplinary representation of present knowledge. It is a comprehensive guidebook for all theorists and practitioners of public participation." (or)


"This paper consolidates existing impact studies with stakeholder experience for a) more comprehensively seizing and categorizing the impacts of transdisciplinary research for sustainable development, as well as b) exploring which features of participatory research processes relate to the respective societal effects. It provides a framework as well as a methodological approach for conducting impact studies and thus helps to more systematically capture the effects attributable to a research project." (gw)


"The monograph introduces concepts, experiences, problems and fields of application of participatory, qualitative research in social sciences. It describes different approaches to participatory research as well as methodological groundings and explores the core principles of participatory research practice. Examples of good practice provide support for the readers so they will improve their capacity to plan, implement and use their own research projects." (kh)

Knowledge exchange


"The aim of this research is to achieve a better understanding of the processes underlying knowledge transfer (KT) in social sciences and humanities (SSH). The paper addresses: first, the extent of SSH research groups’ engagement in KT and the formal KT activities used to interact with non-academic communities; and second, how the characteristics of research groups may influence engagement in various types of KT." (fd)
Inter- and transdisciplinary research methods


“This paper is interesting for all who are working in European (or potentially other inter-cultural) projects. Such projects face a double challenge: First, they aim at implementing transdisciplinary research at local level, so they need to deal with all implications in the specific cases. Second, they require reflection of the local experiences at project level, thus spanning across different cases, countries, and cultures. The methodology presented in this paper discusses these challenges and suggests a new approach to overcome them. The methodology was tested in an European research project aiming at up-scaling from local learning and innovation networks to a regional, in this case European, support framework for innovation in sustainable agriculture.” (hm)


“This paper perfectly exemplifies how progress in transdisciplinary research can be promoted. This paper shows how a vague method is specified according to a set of criteria and it assesses whether and to which extent this method is appropriate for the purpose at hand.” (gh)

“This article analyzes how the World Café can be applied for knowledge integration in the phase of problem framing in transdisciplinary research: In the project *Renewable Energy Regions (EE-Regionen)* the instrument was used to connect different groups of people (scientists and local actors from politics, business, conservation), and integrate their ways of thinking and types of knowledge. The collaboration created positive impulses for local actors as well as scientists, and laid the foundation for productive transdisciplinary work in the following project phases; I thus recommend the article as best practice example for transdisciplinary research.” (us)

Education for inter- and transdisciplinary research


“Aiming to offer experience-based guidance for sustainability programs in higher education around the world, this article describes the problem- and project-based learning (PPBL) program and the institutional context at Arizona State University’s School of Sustainability (SOS). Students’ ability to work in transdisciplinary settings is one of the key elements of a PPBL-program in sustainability.” (kb)

Biographies of TD researchers


“This chapter offers a conceptualization of transdisciplinary orientation as a personal disposition to engage in integrative and innovative TD scholarship and practice. Key dimensions underlying the TDO include certain foundational values, beliefs, attitudes, behaviors, and the individual’s analytic stance in approaching complex scientific and societal problems. Misra, Stokols, et al. are currently evaluating a questionnaire scale to assess TDO, and changes in TDO over time.” (ds)


“This article describes the experience of the authors who participated in an international, transdisciplinary collaboration. It takes a refreshingly candid view of some of the challenges of such collaborations.” (cl)
Team science


"The reported study used a scientific mapping technique to compare the substantive foci of publications produced by members of a TD center-based initiative with two matched sets of traditional investigator-initiated grants in the same field. Publication data obtained from two National Institutes of Health (NIH) databases for all three groups were overlaid onto the University of California, San Diego (UCSD) Base Map of Science. The resulting visualizations revealed that the publications from the TD research centers spread across the topical map of science more rapidly and more comprehensively than both comparison groups." (ds)


"The research reported in this article reports an interview-based evaluation of scientists and trainees’ experiences while participating as members of the US National Cancer Institute’s Transdisciplinary Research in Energetics and Cancer (TREC) centers. The study highlights key facilitators of and constraints on effective TD collaboration within the TD Centers." (ds)

Perspectives from the arts and design


"A breakthrough transdisciplinary, team-based approach to innovation that integrates business, design and engineering." (fd)

Transdisciplinarity in action: projects and case studies


"The transdisciplinary research project FarmClim aims at contributing to a more considerate use of nitrogen in Austrian agriculture and attempts to tackle the "science-policy gap" by using a participatory approach. The design report describes the project design and successful communication processes, thus contributing to a common knowledge base of transdisciplinary project know-how." (tm)


"This book synthesizes the transdisciplinary experience of Centro de Estudios Universitarios Arkos, México and it is written by the Vice Principal of the university, based on her PhD thesis. It presents a meta-analysis of the collective research done by the university actors, its results and implications. Shows a detailed analysis of what could be called the pedagogy for a transdisciplinary education of CEUArkos, including the methodology of transdisciplinary-research-action." (bn)

"The article presents the framework and main results of the project Mountland, which received the td-award 2013. It investigates the impacts of climate and land-use changes on ecosystem processes in three Swiss mountain regions, building on policy integration, network governance and integration of stakeholders. It convincingly presents a best practice example of transdisciplinary research in sustainability science." (tm)


"A critical comparison of the claims of transdisciplinary research and the achievements of five transdisciplinary projects in Gothenburg, Sweden. The analysis provides important insights for a down-to-earth understanding of transdisciplinary research." (cp)


"This article reports on a real experience of engaged research. It draws out a number of useful insights on developing sustainable research engagement with schools in the US. It highlights ethical and practical concerns that researchers need to address while developing engagement with community organisations such as schools." (dd)


"I like this special issue because it presents actual transdisciplinary projects. The discipline of transdisciplinarity must become braver in moving out of the ivory tower" (ck)

Environmental humanities


"This open-access publication (available free via environmentandsociety.org) discusses the theory, practice, and institutional incentives for multi-, inter-, and transdisciplinary research in environmental studies. Basarab Nicolescu, opens the discussion with a brief introduction to his axiomatic approach to the methodology of transdisciplinarity. Contributions from scholars in economic history, political theory, geography, film and literary studies, environmental history, anthropology, and postcolonial studies then reflect on decades of experience among humanities researchers who engage in problem-focused environmental research with social and natural scientists." (bn)


"Environmental research needs a stronger footing in the humanities. This article presents the three strongest current environmental research movements in the humanities: ecocriticism, environmental history, and the environmental humanities" (ck)


"This opinion paper documents the emergence of the Environmental Humanities worldwide and in Switzerland and identifies potentials of this new transdisciplinary movement for more integrative and effective environmental research". (ck)

"Rosenberger analyzes religious-philosophical arguments against climate protection put forth by climate skeptics. The pioneering article is a stimulating example for interdisciplinary exchange." (tm)

**Sustainability science**


"Petri Tapio and Katri Huutoniemi edited a series of articles dealing with transdisciplinary sustainability research and its specific heuristics. Interesting for scholars who want to further explore the epistemic particularities of this form of research." (cp)

**Risk**


"This article is a refinement of the IRGC risk governance model and includes regulatory management issues with insights from the social sciences, decision sciences and political analysis. It provides an analytical as well as normative framework for dealing with complex decisions under uncertainty and ambiguity. It represents a state-of-the art analysis of institutional requirements for coping with modern systemic risks." (or)

**Information technology**


"Three articles published in 2014 in Td The Journal for Transdisciplinary Research in Southern Africa suggest; there is a growing awareness of td amongst IT specialists experimenting across disciplinary boundaries; philosophically, French thinking shapes some local transdisciplinary work; and, music scholars appear to be interested in using Dalcroze techniques to participate in transdisciplinary research projects." (jt)

**Psychology**


"This book highlights the commonality of interest between sociology and psychoanalysis. It points out how research conventions in these two areas have divided the fields, to the detriment of knowledge as well as practice. It offers various ways the two fields can come together in interdisciplinary approaches." (dd)
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