

TRANSDISCIPLINARY RESEARCH IN SOCIAL SCIENCE & HUMANITIES

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Abstract

Transdisciplinary research is a new field of research emerging in the 'knowledge society', which links science and policy to address issues such as environmental degradation, new technologies, public health and social change. It is an approach in which researchers from a wide range disciplines work together with stakeholders. TDR aims to overcome the gap between knowledge production on the one hand. Many of the great research triumphs of the past are products of interdisciplinary enquiry and collaboration including: discovery of the structure of DNA, magnetic resonance imaging, the Manhattan Project, laser eye surgery, radar, human genome sequencing, the 'green revolution' and manned space flight. The sustainability concept aims at overcoming the separation between the society world and the biophysical environment, and between the ecological, social and economic dimensions of development. Organisation of a large-scale workshop and intensive use of broadcasting-like modes of on-line communication at that time helped to broaden both the stakeholder networks and map out the scope of research problems to be taken into account in the agenda. Conversely, the communication with the stakeholders in the second phase, which had been thought as a time for focusing the research agenda and institutionalisation of the platform, comprised small-scale stakeholder workshops, meetings in small groups, and personal e-mail communication.

KeyWords:- Communication, New Technology, Sustainability, Transdisciplinary

INTRODUCTION

In the last two decades, there has been a growing interest in the practice of transdisciplinary research in the social sciences in particular. Although a clear definition of transdisciplinarity is lacking, in order to develop a holistic approach most researchers involved in the subject area apply a research strategy which is dedicated to relevant societal issues and crosses disciplinary boundaries. This often involves researchers, practitioners and other non-academics in the co-production of knowledge.

For Godemann, “Transdisciplinary research refers to problems outside the scientific world which may only be solved by scientists in co-operation with experts in possession of practical experience from outside the academic World”.

Transdisciplinary Research (TDR) is now a well established and expanding field of science. It is an approach in which researchers from a wide range disciplines to overcome the gap between knowledge production on the one hand and the demand for knowledge to contribute to the solution of social problems, on the other.

Pohl, Hirsch Hadorn (2007) implies that the nature of the problem to be addressed is not predetermined and needs to be negotiated cooperatively by actors from both science and the life-world. We can identify several areas in which transdisciplinary research is effectively or potentially utilised.

Hadorn et al (2008) trace the emergence of transdisciplinary thinking in the context of the history of science. Starting in antiquity, the development of Western Science was originally based on a strict dissociation of scientific knowledge from practical knowledge. This distinction gave rise to the ideal that scientific knowledge is universal, explanatory and demonstrated to be true by a standard method.

Hirsch Hadorn et al. (2008) transdisciplinary research seeks to achieve integration of knowledge of different types. Mutual understanding may require mutual explanation of specific disciplinary or professional language or definition of a common language.

Because of the often multidimensional role of social innovation researchers – with questions about the links or boundaries between scientific analysis, political activism, movement organization, advocacy planning - looking at concrete experiences through case-studies is a critical aspect of the methodology-building process. Central to this building process is the joint or social learning process in which different Social Innovation agents share their perspectives, expectations and experiences. Because of the thematic focus of social innovation research on changing the social relations in society and the role of change agency, there is a need for a transdisciplinary steering of epistemology and methodology. Social innovation research is about improving social relations and tackling social problems or meeting social needs. In all of these, concerned people are at the center of interaction and

should ideally be the ones who express their needs and set research priorities, both thematically and chronologically.

The possible roles which stakeholders, practitioners, etc. can take in Social innovation research include:

- ✚ Setting and clarifying the research questions, the kind of answers they expect as well as their expectations concerning the impact of research process and results on collective action;
- ✚ Contributing to the development of transdisciplinary research methods;
- ✚ Active participation in the research, maybe in particular stages of the research process;
- ✚ Give feedback on research outcomes;
- ✚ Give advice on how to implement research results in collective action and policy practice

ASPECTS OF TRANSDISCIPLINARY RESEARCH

Applications of transdisciplinary methodologies have to deal with several practical concerns: participation, development of a coordinating team, cross-sectoral and cross actor integration. The Handbook of Transdisciplinary Research (Hirsch et al., 2008) cites an idealised research project as including the following aspects:

- Problem identification;
- Problem analysis;
- Implementation of the results.

METHODOLOGY OF TRANSDISCIPLINARY RESEARCH

The cooperation between these different networks, which was aimed at elaboration of the research agenda and consolidation of the social platform, took the form of local, national and

international workshops, large scale stakeholder conferences, and a number of small meetings. In addition to the normal consortium interactions, communication was promoted through the interactive Social Polis website www.socialpolis.eu, blogs, a newsletter, mailing lists, and personal e-mail communication. Later on, dissemination of results was supported by different pedagogical tools (Stigendal, 2010). The logic and dynamics of unrolling stakeholder networks and later the institutionalisation of the social platform were intertwined with the transdisciplinary process of elaboration of the research agenda.

The first phase of the project, when Stakeholder Networks 1 and 2 were being activated, served for initial brainstorming and expression of the variety of research needs arising from different communities of practice and geo-regions, and resulted in the production of a draft research agenda consisting of a long list of topics. Organisation of a large-scale workshop and intensive use of broadcasting-like modes of on-line communication at that time helped to broaden both the stakeholder networks and map out the scope of research problems to be taken into account in the agenda. Conversely, the communication with the stakeholders in the second phase, which had been thought as a time for focusing the research agenda and institutionalisation of the platform, comprised small-scale stakeholder workshops, meetings in small groups, and personal e-mail communication. The Inner Circle of Stakeholders played a key role in this phase, acting as a sounding board for new initiatives and a panel responsible for refining research themes. A significant amount of time was also devoted to discussion in small groups at the large international conferences as the Stakeholder Conference, where all plenary sessions were followed by discussion round tables for exchange of ideas and experiences organised in the World Cafe format, which enabled spontaneous formation of discussion groups, democratic exchange of ideas of all participants, and further integration of stakeholder networks through focused discussions in small boards. Last but not least, local stakeholder workshops offered an opportunity for refining the research agenda, enriching conceptual debates on social cohesion and linking reflection on different urban Existential Fields, but also strengthen-ing local networks, and discussing local problems and connecting them to Europe-wide issues.

CHALLENGES AND BENEFITS OF TRANSDISCIPLINARY RESEARCH

The key benefit of TDR is the creation of new knowledge. Reviewing range of international TD based education programmes. TD education equips students with:

- The ability to scope problems and determine how an integrative approach can be used, ensuring multi disciplinary and multi sector involvement
- The knowledge and ability to apply processes such as modelling and group facilitation
- An appreciation of different research epistemologies and an ability to draw on them in a common task
- An understanding of policy, practice and product development, and how these are influenced by research
- The ability to foster research collaboration.

RECOMMENDATIONS

There is a strong case for trans-disciplinarity in environmental and sustainable development research, alongside existing disciplinary research efforts. However, as discussed above, such research needs to be embraced in a critically reflective manner. To aid this process, we put forward the following recommendations:

1. Funding calls for trans-disciplinary research should clearly define these terms so as to give better guidance for applicants. Examples of exemplary research should be given as guidance.
2. There is a need to build time and opportunity for reflection into trans-disciplinary research processes to build trust within the group and to emphasize the importance of the entire process, not just the delivery of measureable outputs.

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