

Learning Procedures: Best Practices of Evaluating
Inter- and Transdisciplinary Projects

**The discourse on evaluation and quality
assurance – our perception and conclusions
for the practice of quality assurance**

September 15, 2011

Atty. Rico Defila
Dr. Antonietta Di Giulio

The discourse on the quality of inter- and transdisciplinary research...

... just like research in this area, is neither very old, nor is it as new as the literature sometimes suggests.

... is progressing in small steps (significant turn beginning, roughly, in 2005/2006).

... is not taking place in a homogenous community, but rather in scattered and diverse groups.

... is crucially characterized by the fact that inter- and transdisciplinary research takes place in the context of projects and is thus limited to temporary collaborations.

... suffers from the low and often disputed status of interdisciplinary and transdisciplinary research in the scientific community.

Our terminology (1)

‘Quality’

- Not neutral (origin): attributes, characteristics
- But normative, evaluative: Meeting set standards, corresponding to predefined requirements
- Refers to tangible units (=,quality domains')

‘Quality assurance’ (or ‘quality enhancement’)

- Measures/arrangements to guarantee that predefined standards are met
- Criteria (operationalization of standards that need to be met) are necessary (=‘quality criteria')

The discourse on quality criteria

Criteria for inter- and transdisciplinary research

- Quantifiable (and indirect) criteria (e.g. publications, patents, dissertations, honours) are insufficient for an adequate assessment of quality
(c.f., for instance, Stoll-Kleemann in Stoll-Kleemann/Pohl 2007)
- It is impossible to devise standardized quality criteria
(c.f., for instance, Boix Mansilla et al. 2006; Klein 2006; contributions in Stoll-Kleemann/Pohl 2007)
- Specific quality criteria are necessary for concrete projects
(c.f., for instance, contributions in Stoll-Kleemann/Pohl 2007; Brohmann in Bergmann/Schramm 2008)

The discourse on quality domains

Relevant aspects of inter- and transdisciplinary research

- Catalogues for the assessment of the quality of inter- and transdisciplinary research are usually catalogues of aspects/ areas considered to be specific to inter-/transdisciplinary research
- No consensus has been reached on a canon of relevant quality domains; in other words, there is no consensus on how to structure the complex phenomenon of an 'inter- or transdisciplinary research project', and on how to define its characteristics

The discourse on quality domains

Various approaches to structuring a project, e.g. in

- Defila/Di Giulio 1999
- Bergmann et al. 2005
- Boix Mansilla 2006
- Klein 2006
- Defila/Di Giulio/Scheuermann 2006
- Pohl/Hirsch Hadorn 2007
- Stoll-Klehmann 2007
- Renn 2008
- Balzer/Wächter 2008
- ...

Our terminology (2a)

What is a ‚quality domain‘?

- Norms and requirements can only refer to entities that can be shaped by people (actions, products)
- Expectations to meet certain norms/requirements can only be directed towards people who, with respect to shaping the entities in question, are at liberty to do something in one way or another
- Quality-related norms/requirements are usually not binary; instead, they can be met to greater or lesser extents, i.e. quality is a matter of „better or worse“

Our terminology (2b)

Definition of ‘quality domains‘

- Quality domains in a research project are those products and/or spheres of action which can be substantially influenced by those involved in the project. They must be amenable to a discourse on quality, i.e. they must be able to be realized „better or worse“

Our terminology (3)

'Evaluation'

- Is one of the measures of quality assurance (to review whether requirements have been/are being met; or, to identify domains in which this must/can be supported)
- Is a singular or a recurring comparison between the actual state and the target state
- Serves either to control the actual state (to review whether the actual state and the target state coincide) or to improve the actual state (to approximate the actual state to the target state, if necessary by revising the target state)

Our terminology (4)

'Evaluation'

	Internal evaluation	External evaluation
Self-evaluation	e.g. colleagues, sub-project leaders	
Third-party evaluation	e.g. advisory board, members of other project (groups)	e.g. reviewer, funding organization

The discourse on internal evaluation

Spirit and purpose of formative internal evaluation

- No end in itself, it must serve a clear purpose
- Can and should support the research process
- Can and should be a learning process
- Should lead not only to adjustments in behavior, but also to re-evaluation and adjustment of norms, assumptions, priorities
- Can and ought to be a form of reflexive (self-)management
- The discussion of quality criteria, quality domains and procedures consolidates a sense of shared identity within a team and contributes to the development of common ground

The discourse on quality assurance

Implications for ‘practical application’

- No consensus/canon concerning quality criteria, quality domains, measures for quality assurance, evaluation procedures
- Start from definitions of inter- and/or transdisciplinarity and characteristics and requirements associated with them
- Substantiate these characteristics and requirements for a specific project, with regard to quality domains and quality criteria
- Be inspired by existing suggestions (catalogues)
- Consider internal evaluation, taking into account ‘meta-criteria’, i.e. requirements on the process of evaluation

The discourse on quality assurance

Evaluation ethic

Those who will be affected by an evaluation must, from the onset, be informed about the criteria and consequences that will be applied, about the specifics of the procedure, and about who is in charge of what evaluation.

Requirements on the development of measures of quality assurance

Overview – What needs to be determined

	Measures for quality assurance	Internal evaluation
What are the relevant domains?	X	X
What is the aim of the measure (for each domain)?	X	X
What are the quality criteria and how are they determined?		X
What methods are used to assess the actual state and to compare the actual state and the target state?	(X)	X
What are the consequences if the target state is (not) reached?	(X)	X
Who is in charge of comparing the actual state and the target state of each domain?	(X)	X

The discourse on quality assurance

Selected bibliography

Bergmann M., Brohmann B., Hoffmann E., Loibl M. C., Rehaag R., Schramm E., Voss J.-P. (2005): Qualitätskriterien transdisziplinärer Forschung. Ein Leitfaden für die formative Evaluation von Forschungsprojekten. Frankfurt a. M.: ISOE.

Bergmann M., Schramm E. (Hg.) (2008): Transdisziplinäre Forschung. Integrative Forschungsprozesse verstehen und bewerten. Frankfurt a. M., New York: Campus Verlag.

Defila R., Di Giulio A. (1999): Transdisziplinarität evaluieren – aber wie? Evaluationskriterien für inter- und transdisziplinäre Forschung. In: Panorama. Sondernummer 1999.

Defila R., Di Giulio A., Scheuermann M. (2006): Forschungsverbundmanagement. Handbuch für die Gestaltung inter- und transdisziplinärer Projekte. Zürich: vdf Hochschulverlag an der ETH Zürich.

Research Evaluation, Volume 15, Number 1, April 2006, [special issue on the assessment of interdisciplinary research]. (darin: **Boix Mansilla et al., Klein**)

Stoll-Kleemann S., Pohl C. (Hg.) (2007): Evaluation inter- und transdisziplinärer Forschung. Humanökologie und Nachhaltigkeitsforschung auf dem Prüfstand. München: Oekom Verlag. (Edition Humanökologie, Bd. 5).