

Genesis and Intent

The Toolbox workshop is an aid to collaborative, cross-disciplinary research. Specifically, it employs a structured dialogue to reveal differences among collaborator's approaches to investigating and understanding the world and applying this knowledge.

Conceived as an outgrowth of a University of Idaho IGERT (Eigenbrode et al. 2007), it has been refined and used for more than 120 workshops with teams worldwide, including REACCH participants.

Toolbox developments have including generation of workshops using prompts for specific types of applications, such as climate science. All REACCH participants have been exposed to a climate science version.

More recently, the Toolbox Project has been inviting certain teams to develop their own project-relevant Toolbox instruments as a means for achieving understanding on key issues and improving project performance.

The instrument here was developed primarily by REACCH graduate students, with guidance from Toolbox Project personnel. We will be exploring it during this annual meeting (Thursday morning).

It is a work in progress. Let us know your reactions to this concept any time!

A Key Definition

For this Toolbox, we define transdisciplinary studies following Tress et al. (2005) as projects that both integrate academic researchers from different unrelated disciplines and non-academic participants, such as land managers and the public, to research a common goal and create new knowledge and theory. Transdisciplinarity combines interdisciplinarity with a participatory approach.

Core Questions and Prompts

Core: What are the requisites for successful transdisciplinary research?

1. Common goals are necessary for successful transdisciplinary research.
2. Transdisciplinary projects like ours can be successful even if there is unresolved conflict among the participants.
3. Lack of time is the biggest obstacle to research integration in our project.
4. Geographical distance impedes successful transdisciplinary research more than distances between disciplines.
5. Transdisciplinary research is more difficult than disciplinary research.
6. Transinstitutional research is more difficult than transdisciplinary research.

Core: What motivates participants in transdisciplinary research?

1. Transdisciplinary research is as valuable as disciplinary research.
2. The potential of transdisciplinary research to address complex problems is the primary incentive for participation.
3. Individual motivation for transdisciplinary research originates from funding requirements.
4. The additional time and organizational requirements of participating in transdisciplinary research negate its benefits.

Core: What are the hallmarks of a successful large transdisciplinary research projects?

1. To be successful transdisciplinary research must produce outputs that are useful to stakeholders.
2. Transdisciplinary projects must facilitate unplanned, spontaneous collaboration to succeed.
3. To be successful, projects addressing large, long-term, complex problems must have mechanisms for continued effort beyond the funding period.
4. A critical measure of transdisciplinary project success is how well graduate students are trained to do transdisciplinary research.
5. Participants in transdisciplinary projects must perceive a shared responsibility for the success or failure of the entire project.
6. Integrating social and biological sciences is necessary to produce actionable science.

Core: Must institutions be changed to adequately address complex issues like climate change?

1. Researchers should actively promote transdisciplinary research in their institutions/agencies.
2. Traditional departmental structures are inadequate for addressing complex issues.
3. Graduate students should be strongly encouraged to collaborate with students from other disciplines.
4. Institutional incentives should be altered to provide fiscal incentives for faculty involvement in transdisciplinary research.

Core: What are the benefits of sharing data in transdisciplinary research?

1. Difficulties in obtaining, understanding and applying others data outweigh the potential benefits of shared data.
2. Stakeholders benefit greatly from access to data sets generated with public funding.
3. Data is only useful when shared between closely related disciplines.
4. Researchers should have no reservations regarding shared data within transdisciplinary projects before publication.

Core: How should researchers engage with stakeholders in transdisciplinary projects?

1. Growers are the only stakeholders for our project
2. All researchers are responsible for directly engaging with stakeholders
3. Face-to-face engagement with stakeholders is requisite to the success of transdisciplinary projects.
4. All researchers should be responsible for generating products directed at stakeholders.
5. Involving stakeholders as participants is an essential part of transdisciplinary research.
6. Transdisciplinary research always produces more useful products for stakeholders than disciplinary research.



NIFA award #: 2011-68002-30191
NSF award #: SES-0823058

References

- Tress, B., G. Tress, and G. Fry. 2005. Environmental Management 36:792-807
- Eigenbrode, S. D., M. O'Rourke et al. 2007. Bioscience 57:55-64

* Author order: reverse alphabetical for students, then for faculty