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SYNTHESIS OF THE WEBINAR (VERSION 23 NOVEMBER 2016):

CONCEPTUALIZATION AND MEASUREMENT OF LEARNING

WEDNESDAY, 16 NOV 2016, 8.00 – 9.30 AM GMT (9.00 – 10.30 AM CET)

**ORGANIZED AND HOSTED BY:
THE INTEGRATED ASSESSMENT SOCIETY
AND
THE INSTITUTE OF ENVIRONMENTAL SYSTEMS RESEARCH**

Introduction

Learning is of crucial importance for transitions towards sustainability in general and natural resources management in particular. In both fields, different learning concepts have become popular, including social learning, transformative learning, or experimental learning. How learning is being conceptualized and measured by different people in different contexts is the focus of this webinar. In doing so, we discuss recent developments and challenges, thereby contributing to ongoing discussions on the conceptualization and measurement of learning and bringing together those who are interested in learning in transitions as well as those interested in (social) learning in natural resources management.

This webinar is organized by the coordinators of a [Learning Community](#) (see below), which was established as a follow-up of three sessions on learning at the [International Sustainability Conference 2016](#). By establishing this Community, its coordinators aim to enhance the learning capacity of those who examine or seek to stimulate or organize learning processes. To this end, we bring together people working on learning in transitions and those working on social learning in natural resources management. We expect that both communities have a lot to offer to each other. By connecting these usually rather separate communities, we hope to create synergies and to identify and address cross-cutting questions.

The webinar is the first in a series of webinars that we would like to organize on learning. Ideas for future webinars and expressions of interest are welcome at learningcommunity@tias-web.info. The webinar is organized and hosted by The Integrated Assessment Society (<http://www.tias-web.info>) and the Institute of Environmental Systems Research (<https://www.usf.uni-osnabrueck.de>).

Link to the recording: <https://webconf.vc.dfn.de/p6qtabfik4x/>

Synthesis of presentations and discussions

Community-based social learning interventions

Romina Rodela, School of Natural Sciences, Technology and Environmental Studies, Södertörn University, Sweden

- Approaches to natural resources management changed over time with learning becoming increasingly important
- Social learning is a normative construct that has been inspired by many other disciplinary discussions and ideas. It is not a theory and not about behavioural change or about vicarious learning
- When it comes to community based interventions, different aims are prevalent and the evaluation of learning often happens afterwards. This has methodological implications since people respond differently to questions about what they learned at different points in time. Moreover, the boundary between evaluating the intervention and learning is often unclear.
- From a conceptual points of view, it is important to be clear about guiding assumptions and to operationalize and measure learning in an adequate way.
- Many challenges continue, including how to generalize from results and to find a balance between subjective and objective approaches (learning is a lived experience).
- Theory building is important. Yet, social learning interventions are often build “backward”, thus, not really helping in theory building. Doing studies in different contexts may help. We should look for reproducibility, replication, and syntheses of results.
- For more information about operational measures of social learning, see: Romina Rodela (2014), Social Learning, Natural Resource Management, and Participatory Activities: A reflection on construct development and testing, NJAS Wageningen Journal of Life Sciences 69, p. 15-22.
<http://library.wur.nl/WebQuery/wurpubs/454690>

Matching the potential of learning to transitions

Pieter Jelle (PJ) Beers, Dutch Research Institute for Transitions, Erasmus University Rotterdam, the Netherlands

- Key question: How can theoretical assumptions about learning enrich transition science?
- From a transition perspective, learning can occur in experiments or local niches, across these experiments as well as at the level of the transition arena and across levels.
- Conditions for learning in transitions include: diversity, time and reflexivity.
- Existing approaches, including educational science, organizational learning and social learning in natural resources management, pay limited attention to aspects that are relevant to transition studies. Integration of different perspectives is needed.
- To understand learning in an experiment, we studied learning as a discursive process of communicative interaction. Using transcripts, we looked at what speakers said about knowledge, relations and actions. The approach combines insights from both the social learning and educational science literature (which misses the diversity aspect).
- For more information about the presented approach, see: Beers, P., B. van Mierlo, and A.-C. Hoes. 2016. Toward an Integrative Perspective on Social Learning in System Innovation Initiatives. *Ecology and Society* 21(1):33. <http://dx.doi.org/10.5751/ES-08148-210133>

Highlights from a review on conceptualizing social learning

Geeske Scholz, Institute of Environmental Systems Research, University of Osnabrück, Germany

- The definition of social learning proposed by Reed et al (2010) has been adopted, extended and put aside in social learning studies. We did a systematic review of literature citing Reed et al (2010) to synthesize the recent developments in conceptualizing social learning.
- Scholars do not agree upon the need for single definition. We propose a protocol that helps researchers to clearly define and conceptualize social learning and to describe case studies and methodology in sufficient detail, to enable comparative research
- Issues for the conceptualization of social learning include how to deal with collective and dynamic

nature of learning as well as with learning intensities. We propose to pay attention to the direction and the purpose of the learning process. Furthermore, reporting on contextual factors can enable the comparison of research and the synthesis and aggregation of knowledge beyond single cases.

Highlights from a review on learning in transitions

Johannes Halbe, Institute of Environmental Systems Research, University of Osnabrück, Germany

- We conducted a systematic literature review of learning concepts in transition research and identified factors that may support or impede learning.
- Our conceptual framework distinguishes between learning intensities and links this to learning objects and outcomes. We further distinguish between learning processes based upon social interactions and direct experience /experimentation. These learning processes are situated in different learning contexts including individual, group, organizational and policy contexts.
- We used the Management and Transition Framework (MTF) to conceptualize learning in sustainability transitions based upon the conceptual framework.

Roundtable discussion and wrap-up

For the sake of time, we could not address all questions that were raised in detail. Below is a brief summary of the questions that were addressed by the presenters as well as a synthesis of the lively discussion in the chat box.

- Dynamics are important (see e.g. Romina's presentation). For example, feedback loops from outcomes to the process, how individual versus group dynamics influence learning processes and how to account for socialization processes. For example, trust plays an important role.
- Learning intensities (often conceptualized as single, double and triple-loop learning), how to capture them and how to link them to reflexive societal change is one of the aspects that will be taken up in a future webinar. One comment that was given in response to Johannes Halbe's presentation is that learning intensities are often defined in reference to the learner's knowledge, interests and values. One of the participants noted that from a transition perspective, it might be promising to link the learning process to reflexive societal change.
- In relation to the previous point, a lively discussion arose about connecting different levels and the role of attitudes and values. Herewith a synthesis of the discussion:
 - o At a higher aggregation level (e.g. societal level) there is a need for a more generalized representation of e.g. values. This might make it difficult to relate the levels. One solution would be to compare the content of learning outcomes to the content of reflexive changes. This might be a solution but the time horizons and levels of abstraction are quite different. In response to this, another person states that values, attitudes, etc. are essential factors that both shape and are shaped by the learning processes.
 - o To link different levels (i.e. how learning at one level may influence another level), you can link to knowledge management and regular dissemination. Yet, it is difficult to map.
- What about the role of a researcher? How can we as researchers remain critically aware of our role whilst allowing ourselves to improvise to emergent learning in contexts?
 - o One of the participants experienced this challenge in her research on learning communities, which involved participant observation. Transparency, authenticity, and reflexivity served as key tools to maintain a critical awareness.
 - o Another participant adds that the role of a researcher is difficult when you are doing action research. You really need clear frameworks what and how to evaluate. Another person adds that we need to be more transparent on this. Someone else agrees and adds that researchers need to be explicit on their intentions, frames of reference etcetera. The person further adds that interventions are not necessarily research-related activities. Any societal actions or changes can be regarded as interventions (in a status quo).
- Open questions:
 - o What methods are available to quantitatively measure social learning?
 - o What role do you see empathy playing in social learning for transitions?

- Are there studies that integrate the concept of “social contracts” to social learning for transitions?
- Is the concept of global niche similar to the concept of institutional field, which is used in institutional theory? Institutional theory distinguishes between what goes on at local or organizational level and how this relates to visioning and reaching consensus at higher policy making or decision-making levels.

We conclude that there is a lot of material to continue the discussion. We also see that there is a need for integrating insights from diverse disciplines, to be transparent about concepts, definitions and methods and to address specific needs (stay diverse) and yet also move forward by using protocols and synthesizing and testing available knowledge.

About the presenters

Romina Rodela is a researcher working in the interdisciplinary field of environmental governance. She has a research interest in participatory approaches, collective action and social learning. As part to past projects she was engaged on research synthesis of conceptual and methodological aspects of the literature on social learning in the field of natural resource management. Romina is currently managing the project" at Södertörn University (Sweden). She is collaborating with Wageningen University (the Netherlands) and Can Tho University (Vietnam) on the assessment of the learning effects of serious games in the context of climate smart technologies in the Mekong Delta, Vietnam.



Pieter Jelle (PJ) Beers is a transition scientist. His academic expertise focuses on learning and monitoring in transitions. He does most of his work in the fields of agriculture and education. He currently works as professor of applied sciences at HAS University of Applied Sciences (Den Bosch, The Netherlands) and as senior researcher at DRIFT, the Dutch Research Institute for Transitions. PJ studied Environmental Health Sciences at Maastricht University and obtained his doctoral degree in Educational Technology in 2005 at the Open University of the Netherlands, on research about knowledge sharing in multidisciplinary teams.



Geeske Scholz is lecturer at the Institute of Environmental Systems Research at Osnabrück University, Germany. She holds a PhD in Applied Systems Science. Geeske published on social learning, the evaluation of participatory methods, and agent-based modeling. Her research interests are social learning and social change, setting a focus on group interaction and dynamics in the process. Besides empirical research and work to synthesize knowledge, she uses modeling, specifically computer simulations, to understand and facilitate social change.



Johannes Halbe is a postdoctoral researcher at the Institute of Environmental Systems Research, University of Osnabrueck, Germany. He has an interdisciplinary educational background with a Diploma degree in Civil Engineering (Dipl.-Ing.) and a B.A. in Economics. In his research, Johannes analyses the applicability of participatory modelling methods to stimulate learning and actively govern transition processes towards sustainable development.



About the organizers

This webinar is chaired by Joanne Vinke-de Kruijf who organizes this webinar in cooperation with Caroline van Bers and the other three coordinators of the Learning Community: Johannes Halbe, Geeske Scholz (see above) and Claudia Pahl-Wostl.

Joanne Vinke-de Kruijf is postdoc researcher at the Institute of Environmental Systems Research, University of Osnabrück. Additionally, she is the honorary secretary of The Integrated Assessment Society. Her research focuses on international cooperation, (social) learning, policy transfer and governance in the domains of water management and climate change adaptation. In her current research, she examines learning about climate change adaptation through European cooperation projects. Before joining the University of Osnabrück, Joanne worked for one year as international project manager at a Dutch regional water authority. She obtained her PhD degree from the University of Twente, the Netherlands in 2013.



Caroline van Bers has been involved in environmental management and sustainable development with academic, governmental and non-governmental organizations in Europe and North America for over twenty-five years. This work, ranging from research to capacity development, has always been interdisciplinary and applied in nature. A particular focus has been the promotion of Integrated Assessment approaches and methods at the science-policy-practice interface particularly in my role as programme manager for [The Integrated Assessment Society](#) for more than ten years.



Claudia Pahl-Wostl is professor for resources management at the Institute for Environmental Systems Research at the University of Osnabrück, Germany. Her major research interests are adaptive, multi-level governance and management of water resources, social and societal learning and their role in sustainability transformations, and conceptual and methodological frameworks to analyze social-ecological systems. She is (co)author of numerous papers in peer-reviewed journals, chapters in edited books, policy briefs and popular reports. Her emphasis on interdisciplinary and community-building work is reflected in her role as editor of three books and fifteen special issues in peer reviewed journals.

