

RESCUE WG4 - Towards a Revolution in Education and Capacity Building

RESCUE Alignment Workshop

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Vision of the initiators of RESCUE

[...] the dualism of nature and culture [...] both obstructs our understanding what is global change and weakens our ability to address those challenges.

It is thus essential to overcome the current academic division of work also through a **REVOLUTION** in education system, especially in Europe.

Types of questions we were asked to address

- How to **intensify the discourse** between natural and physical sciences & social and human sciences?
- **Perspectives** of research careers for young researchers?
- **Barriers** that deter the young researchers from interdisciplinary routes and the **incentives** to bring them on this route?
- How to create and nurture individual and **institutional mechanisms** to ensure transdisciplinary educative approaches?
- How to **fill the gaps** in trans-disciplinary education at the university level affecting the capacity in inter-disciplinary research in Europe?
- **How could ESF and its partners add their voices to change the university's mindset and curricula in insuring proper interdisciplinary research and education?**

Education and capacity building entails:

1. Building capacity to do the interdisciplinary and systems research required by Earth Systems questions.
2. Reforming the university education system that trains potential researchers and educate citizens about sustainability
3. Address the primary and secondary education systems to create awareness of sustainability
4. Capacity building and education of researchers in developing countries
5. Educate the public at large and the politicians on those topics

What kind of knowledge (production)?

- Knowledge that fully integrates the social sciences, humanities and natural sciences, recognizing that the questions we pose and the research we undertake must be jointly framed
- Knowledge that is co-designed, co-produced; that draws in and engages a range of stakeholders and/or users
- Knowledge that is inclusive of the full range of theoretical and methodological approaches, of multiple socio-geographic perspectives
- Knowledge that embraces indigenous knowledge and other sources of expertise and know-how
- Knowledge that brings together scholarship and practice

Barriers to implementation

- The incentive and reward structures that sustain disciplinary silos and, at least in the case of the social sciences and humanities, create disincentives to working on global environmental change issues
- Global divides/asymmetries in resources and capacities
- Hegemonic concepts and traditions in a multipolar research world
- Policy contexts that make student numbers, economic growth and university rankings the primary concerns of university leaders

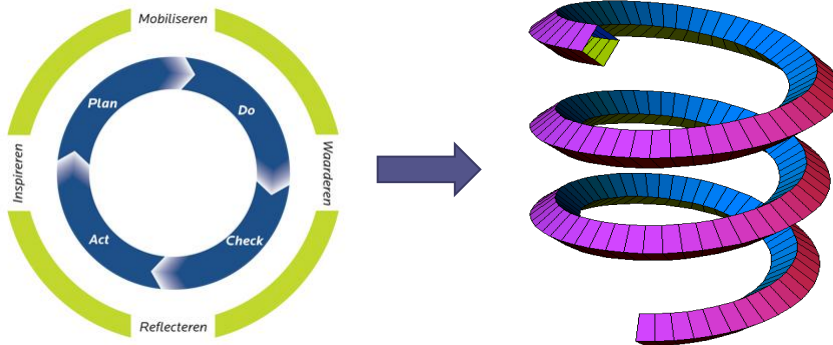
Next steps would have been

- Best practice overviews,
- Lessons learnt and
- A set of recommendations for actions at individual, organizational and systemic levels of policy making.

Would that constitute a revolution?

- How to get those with the power and responsibility to shape education and research training to take our recommendations seriously?
- Why would they when chances are that they have probably heard them many times before?

No: change of perspective needed!



It is not just about changing the system, but also about changing the way of looking at the system of education and capacity building by those with the power to make changes happen

A revolution?

(2) : motion of any figure about a center or axis;

(3) : rotation



Revolution

: a fundamental change in the way of thinking about or visualizing something : a change of paradigm



Attitudes towards a revolution

- What types of attitudes are represented within our working group, and among participants in our workshops?
- How do these different attitudes influence recommendations for revolutionary change?



Assessing Attitudes: Q methodology

- Systematic analysis of attitudes towards and views about a topic; origin: psychology (Stephenson 1953), political science (Brown 1980)
- Hybrid mixed method: qualitative-quantitative
- Uses forced-choice ranking of set of statements (or images) on a Likert-type scale
- Uses correlation, factor analysis and rotation to produce typified response sets to the topic in question

Outcome: Factors that represent the *types* of attitudes held by the participants on the topic”

How does it work?

- Assembly of statements that represent the ‘concourse’ on a topic – all possible attitudes and views; sourced from
 - Interviews
 - Literature
 - Public media
- Participant is instructed to rank statements into a forced-choice grid
 - Prioritisation of strongly agree/disagree statements
 - Statements eliciting indifference form the middle ground

Sample statements

- "Fundamental philosophical differences make interdisciplinary research between the natural and social sciences difficult and unlikely."
- "The goal of a revolution in education should be to develop environmentally friendly values, primarily based on experience-based understandings of ecology."
- "Environmental problems are scientific knowledge-based in character and are resolved by means of research and gathering information."
- "Education should build capacity to address situations that we cannot yet fully understand."
- "Education should be used as a lever for social change."
- "We can make good predictions about what the world will be like in 20 yrs."
- "Education should help students to be responsible and caring citizens capable of contributing to a just society."

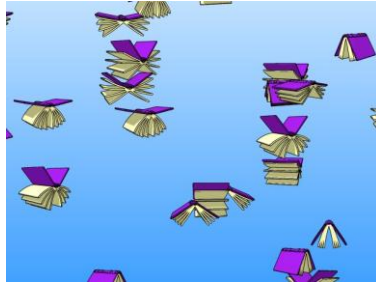
Factor 1: Education for social transformation

- Foster proactive behavior and adaptive social learning;
- Develop social consciousness to address environmental problems;
- An instrumental approach to an uncertain future.



Factor 2: Multi-dimensionalizing environmental issues

- View environmental problems from multiple perspectives;
- Question current assumptions and the way we think about the future;
- Key role for interdisciplinary education.



Factor 3: An open future

- We don't know what sustainability entails, or what the future holds;
- We need to think about the future differently;
- Question assumptions about education and capacity building.



Factor 4: Education for political change

- Education alone is not enough – we need a more open and democratic political process;
- Participatory, action-oriented education
- Education is often part of the problem (reinforces hegemonic ideals)



Blind spots?

- "We are often stuck in the ideology of a single truth. We isolate ourselves from those parts of reality that don't fit our ideology"
- "The picture of the whole you see should include yourself—the observer—as part of the system you are trying to fix."

Scharmer, C.O. 2009. Theory U: Leading from the Future as it Emerges. San Francisco: BK Press

Foresight: Visioning a Capacity Revolution

The Goal: To change the way we think, and in doing so, change our capacity to learn and act.

The Problem: A discontinuity exists between the past and the future. The emergence of new, potentially powerful capabilities for learning and acting exists alongside evidence that existing capacities to learn and act are inadequate, even dysfunctional to the point of being dangerous.

The Challenge: Can we imagine changes in the conditions of change?

The VCR Process

- Q sort (exploring personal values on education and capacity building)
- Futures Literacy Level I: Expectations for the future
- Futures Literacy Level II: Rigorous imagining
- Futures Literacy Level III: Questioning anticipatory assumptions

VCR - Personal Experiences

“Our “creations” of a future society – as brief and incomplete as they were – shifted the kinds of questions I ask about the role of sciences, of research, in shaping society. Integrating the sciences, and really getting the social sciences involved in framing sustainability research questions, seemed all important; now I wonder whether it is enough. Why don’t we use the abundance of knowledge we do have at our disposal? Would integrated knowledge really be more usable and used? What other knowledges and awarenesses do we need to bring to bear on the problem? Whose knowledge? Whose awareness?”

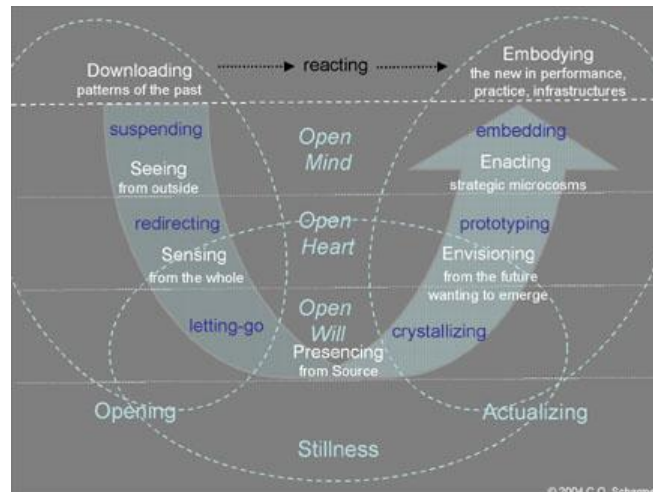


VCR - Personal Experiences

“The VCR process changed the way that I think about the future, but to be honest I still will need time to make sense of what the VCR process did to me; to put together in a meaningful way the many pieces of my part of our shared puzzle. As you, RESCUE partners in crime, and as other colleagues around the world I am sensing the “tenor of the time”, but I’m still trying to get a hold of the whole thing, of how to ask questions in a different way, of the possible starting points and the many pieces that are missing or need to be approached in a different way.”



Theory U

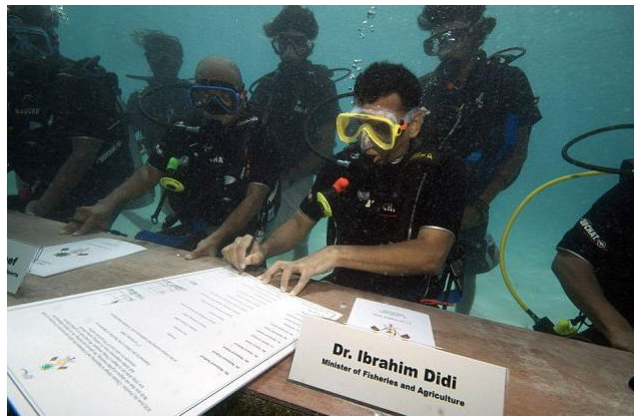
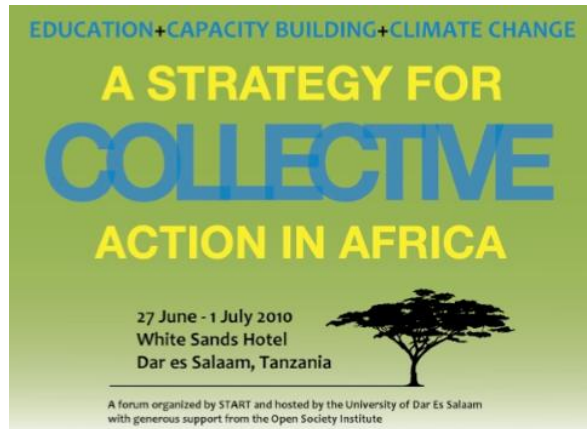


Moving Towards a Revolution...

- "In groups, organizations, and larger systems it is the structure of the relationship among individuals that—when changed—gives rise to different collective behavior patterns."
- "Change efforts often fail because of an insufficient comprehension of the issue of social complexity."
- "Self-organization needs people to actively create the conditions that allow self-organization to evolve."

Scharmer, C.O. 2009. Theory U: Leading from the Future as it Emerges. San Francisco: BK Press

”Experience Experiments”



”Change the way you look at things, and the things you look at will change”