Learning and collaborating within sustainability transitions – transformative formats in university-business cooperation

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Theoretical Framework: Learning and collaborative dimensions in sustainability transitions

Sustainability Challenges
Society currently faces fundamental sustainability challenges in various domains, such as energy supply, water scarcity, transportation and agriculture (Markard et al., 2012).

Sustainability transitions
Sustainability transitions belong to the category of socio-technical transitions that include changes in institutional and cultural structures and differ thereby from merely technological transitions (Markard et al., 2012). They overlap with characteristics and objectives of societal transitions (Holtz et al., 2015), but add the focus of a “fundamental transformation towards more sustainable modes of production and consumption” (Markard et al., 2012).

Learning within sustainability transitions
Of particular interest is double and triple loop learning hence continuous reflection about underlying values and assumptions. This is also called higher order learning referring to new actions resulting from processing new values.

We emphasize collective learning processes supported by cross-sector partnerships between university-businesses-civil society aiming to organize the transition arena.

Collaborating within sustainability transitions
Multi-stakeholder collaboration often focus their direct interventions on specific local or regional contexts (Forrest et al., 2014), and are characterised by inter- and transdisciplinarity (Mauzer et al., 2013; Walter et al., 2007). Rather recently, particularly in science-society interfaces, some new trends can be observed: a shift from traditional expert-driven knowledge transfer to open dialogue and the co-creation of knowledge (Biberhofer and Rammel, 2017).

Research Questions
How can learning in sustainability transitions in general and sustainability-driven entrepreneurship in particular be fostered? How can innovative collaboration formats between higher education institutions and businesses be created and implemented in order to accelerate sustainability transitions?

Research design and methods

Specific setting
Erasmus+ Knowledge Alliance project CASE (Competencies for a Sustainable Socio-Economic Development) funded by the European Union, 2015-2017, is an EU project that brings together partners from five European countries (Austria, Czech Republic, Germany, Italy, and Sweden).

Three expert interviews and case studies
73 expert interviews with sustainability-driven entrepreneurs and university partners. Three case studies evaluating innovative collaboration formats between higher education institutions and businesses in-depth.

Findings: Transformative Learning Settings and Collaboration Formats

The findings highlight the urgent need to organize the transition arena towards transdisciplinary interaction processes. Sustainability challenges require different roles and new organizational understanding of universities and businesses. Transformative learning settings and collaboration formats have to be implemented at the science-society interface in order to accelerate sustainability transitions.

Discussion and Outlook

Three Learning Phases constitute the Transition Arena and can be understood as new forms of governance supported through cross-sector partnerships between civil society, (higher) education institutions and businesses.

In the beginning joint problem framing is decisive, followed by co-creation processes towards solutions and finally (re-)integration of knowledge and competencies is key.

Transformative Learning Processes need structural and institutional embedding at the science-society interface. Sustainability topics need to be integrated into existing learning contexts and curricula. New and innovative methods are demanded such as networking and platform approaches. Transdisciplinary learning spaces such as urban labs focusing on informal learning need to be implemented.