Working paper: Evaluation of peer group projects for transformative learning and programme accountability in the Certificate in 'Sustainable Development and Social Innovation'

Draft, Ariane König, 15.9.2014

Problem-based learning in groups and teaching in teams poses significant new challenges to evaluation of individual learning, project quality and programme accountability. This working paper presents first thoughts on an approach to evaluation of peer group projects that are an integral part of the Certificate. The paper addressed the purpose of evaluation, evaluation criteria, the evaluation process and who evaluates, and key concepts underlying this approach to evaluation for transformative learning in turn.

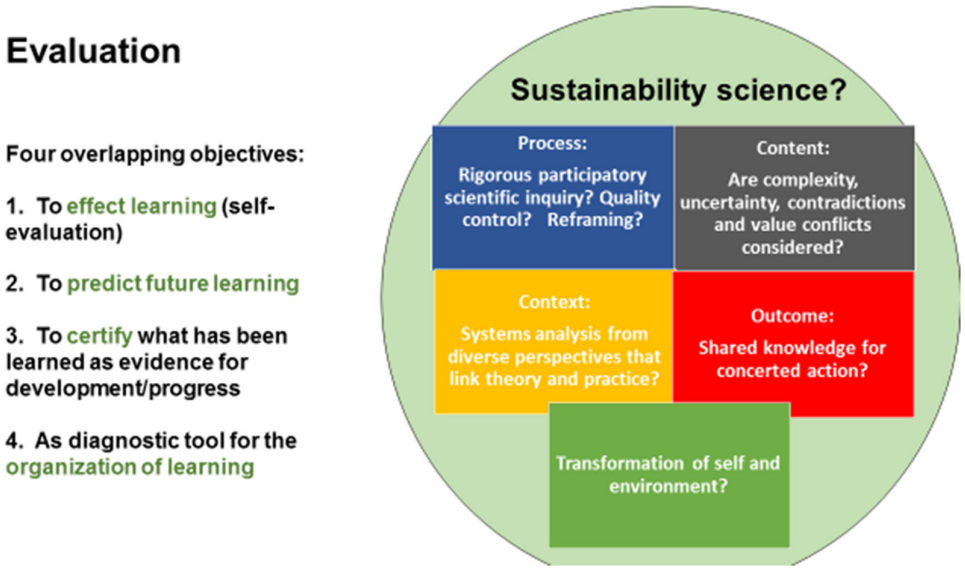
1. Purpose of the evaluation

In the Certificate, evaluation of peer group projects shall inform transformative learning for further development and improvement at several levels of organization: the individual group member; the peer group; the project design and facilitation; and the Certificate programme as a whole. Moreover, evaluation at the level of the peer group projects and, in association, of the Certificate programme provides as a means of accountability for fees and public money spent.

2. What is evaluated? (Criteria)

In the evaluation of a problem- or practice-based peer group project we gather diverse judgments on four dimensions of the project:

Figure 1. Dimensions for evaluation



a) **Process:** Does it fit the description of a systematic, rigorous participatory inquiry? Are selected methods appropriate and well-implemented? Was the process clearly defined, communicated and dependable– was it open to scrutiny? Can it be recreated? What was the quality of the team work? Was room in the process created for deeper reflection about purpose and progress, with possibilities for reframing based on new information? Quality of individual and social learning?

b) Context: How well was the context described in which the project takes place? Is academic literature cited - Were links to salient theory in the two courses established, and were course concepts used as analytic tools? Were external constraints and challenges recognized early on?

c) **Content:** Was adequate attention paid to a first gathering of data and analysis of the situation? Was there a participatory framing step to identify key issues, key concerns, and questions from diverse perspectives to define a salient objective and an appropriate scope that remains feasible in the given time frame with given resources? Were objectives plausible?

d) **Outcomes and impacts:** How close were initial objectives achieved? If not, why not? Is there evidence of transformative learning of individuals, the group, beyond the group? Were resources used effectively? What impacts were achieved? Was transferability to other contexts considered?

e) Was transformative learning achieved that changes relations of project participants to each other and to their environment? Was the physical and institutional environment transformed? How close was the match between self-evaluation of the group and evaluation of external stakeholders?

For each dimension a-e the question is asked – what was achieved? What might have been room for improvement? Evaluation will occur at three points in each semester based on deliverables for the following milestones:

- Project team action plan (winter semester: due on 1 November 2014)
- Peer group project presentation (winter semester: last course session – 16 December 2014)
- Peer group final report (winter semester: due on 5 February 2014)

3. **How is evaluation organized?** (Process)

Evaluation of above project aspects through multiple perspectives is deemed more valuable for learning than just drawing on one perspective.

a) **Individual participants**: Each individual participant reflects on their own participation and level of engagement in the group and on what they have learnt at the end of the semester, and possibly throughout in their reflective diary. At the end of the year we will organize a 360 degree feedback where each participant is asked to evaluate their level of engagement and that of all other members in the group.

b) **Peer groups:** The peer group reflects on their own work at the end of each semester, each individual brings their reflections and one session before the final presentation serves to pool reflections and come to a group judgment of strengths and weaknesses of their work along the above project pyramid, that is part of the final peer group presentation and the final report. The peer group should select a chair amongst them to facilitate this discussion.

c) **Peer project steering group:** The project steering group is composed of all peer group project facilitators in any given academic year, and of other stakeholders in the Certificate who are interested in past, present or future peer group projects. The facilitators evaluate and provide feedback on the action plans. Several members of the steering group will evaluate and provide feedback on the peer group presentations during the course session (see Evaluation Guidance Table in Annex I). It is the responsibility of the peer group to document this feedback and address it in their final reports. The steering group will meet once all final reports for the semester were handed in and evaluates these and develops feedback as a team. On these occasions peer group work for the next semester will be planned.

E-portfolios: Next year we will invite participants to develop an E- portfolio (electronic folder or file) where they collect all their written work towards the Certificate, include pictures and/or draw on other creative modes for representation of new impressions, learning, and personal development gained relating to courses and peer group projects. The E-portfolio is topped at the end of the Certificate with an overarching text that provides links to all individual elements of work and provides an overview on personal learning and development in the course of the Certificate, giving some indication of the starting point of the journey and motivations to enroll in the certificate and an outlook on next steps after having completed the Certificate in terms of furthering personal development or career plans. E-portfolios can help to represent personal development pathways from an individual point of view and as such are complementary to group evaluation of problem-based group work and team teaching efforts (Penny-Light et al., 2011).

4. Fostering social learning in Luxembourg

Apart from participatory processes involving other stakeholders in peer group projects, the Cell for Sustainable development will develop a website with all work that peer groups wish to publish to serve as resource for other groups with overlapping objectives.

The ‘peer project steering group’ includes stakeholders external to the university who are interested in staging social learning processes in Luxembourg that draw on expertise from practitioners and scientists. These include stakeholders interested in renewable energy cooperatives, social housing cooperatives, micro-finance and social inclusion projects. Through participation of these stakeholders in Luxembourg working themselves to promote social innovation for sustainability, we ensure salient learning and critical judgment on actual impacts and how better to promote societal transformation.

5. Key concepts and literature underlying this approach to evaluation for transformative learning

The fundamental problems of civilization in the 21st century are complex, as they involve human-environment interactions. Traditional disciplinary fields of science can play only a limited role in resolving the complex problems of environmental sustainability, especially considering the prevailing rift between the natural and the social sciences. **The peer group projects stage** a social learning process relying on participatory inquiry that involves recognition of uncertainty, ignorance, value conflicts and complexity. Social learning can by design occur across levels of social organization including individuals, groups, organizations,

Peer group work as participatory inquiry for the practice of sustainability science: Peer group projects offer a co-designed and systematic process of participatory inquiry that engages diverse

perspectives from a wide range of scientific expertise, professions, interests, and experiences in a transformative learning process. The main learning outcome is to produce shared actionable knowledge on complex problems. This collaborative process aims to satisfy emerging requisites to sustainability science by incorporating (1) diversity of theories and methods; (2) recognition of uncertainty, ignorance and humility; (3) co-creation of knowledge and respectful dialogue among participants and (4) self-awareness and reflexivity.

Transformative learning: This kind of transformative learning process assumes that knowledge is constructed for action, and that learning can be mediated by practice (Lotz–Sisitka & Raven, 2004). Transformative or 'triple loop' learning for sustainability, engages learners to rethink and act upon how societies and individuals interact with their environments (Seely Brown et al., 1989). Learning is not only based on personal experience in the sense of Kolb (1983), but learners including teachers need to be challenged by the experiences and perceptions of others in a dialectical manner. Transformative learning relies on collective learning in diverse groups, organizations or networks. In order to embrace uncertainty, complexity, and the unknowable we need to draw on plural rationalities and contradictory behavior. Successful learning interventions need to be managed to ensure that experiential situated knowledge from diverse communities of practice is made explicit, communicated and understood by others.

Transformative learning requires the active participation of learners. Learning at any level of social organization (in individuals, groups, societies) results in the acquisition of competences, a gain of knowledge, and lasting changes in prevailing behavior. The fact of knowing more and differently, and mastering knowledge in a different manner leads to a transformation of our relationship to the world and to ourselves (Jaeggi, 2011). In line with Sterling (2004), we consider transformative learning as a life-long iterative process, doors to which may be opened through engagement in projects that integrate education, research and civic engagement (Sterling, 2004; Gough and Scott, 2007). Progress then builds on the evaluation of and passing judgment as individuals and groups on a direction of development. Distinct from evolutionary selection, this process requires critical dialectics, reflection and fundamentally changes its subject.

The learning environment is conceived as an integral part of this learning, as there is intricate interaction and change in the relation between the subject and the context it is embedded in. A recent analysis of the literature on sustainable development in higher education has noted that society requires more diverse spaces and guidance for implementation for such processes (Wals & Blewitt, 2010). Universities have an obvious role to play in addressing this need. As part of the Certificate we have committed to learn towards continued improvement in offering such spaces.

Evaluation of such transformative learning should both serve purposes of informing further learning and accountability (Stringer, 2007; and Guba & Lincoln, 1989).

References

Gough, S. and Scott, W. (2007). *Higher Education and Sustainable development: Paradox and possibility.* Abingdon: Routledge.

Guba & Lincoln (1989). 4th generation evaluation.

Jaeggi, R. (2011). *Kritik von Lebensformen*. Berlin: Suhrkamp.

König, A. and Ravetz, J. (2014). *Sustainability science as social learning: philosophical foundations.* Manuscript in preparation.

Kolb, D. A. (1983). Experiential Learning: Experience as the Source of Learning and Development. Prentice Hall.

Lave, J. and Wenger, E. (1991). *Situated learning: Legitimate peripheral learning*. Cambridge: Cambridge University Press.

Lotz-Sisitka, H. and Raven, G. (2004). Learning through cases: adopting a nested approach to case-study work in the Gold-Fields participatory course initative. *Environmental Edcuation Research* **10** (1), 67-87.

Penny-Light, T. Chen, H. and Ittelson, J. (2011). *Documenting learning with e-portfolios*. San Francisco, CA: Jossey-Bass.

Seely Brown, J., Collins, A. and Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher* **18** (1), 32-42.

Sterling, S. (2004). 'Higher Education, sustainability and the role of systemic learning' in Corcoran, P.B. and Wals, A.E.J. (eds) *Higher education and the challenge of sustainability: Problematics, promise and practice*, Dorderecht: Kluwer Academic Publishers, pp. 47-70.

Wals, A. E. and Blewitt, J. (2010). Third-wave sustainability in higher education: Some (inter)national trends and developments, in Jones, P., Selby, D., Sterling, S. (eds) *Sustainability Education: Perspectives and practice across higher education*, London: Earthscan, pp. 55-75.

Annex I. Steering group evaluation matrix

Evaluation Guidance Table to complete by steering group members during peer group project presentations and when judging final reports:

PEER GROUP X			
Project dimension	**Evaluation Questions**	**Grade 1-5**	**Comments**
Process :	Methodology? Quality of team work? Dependability? Room for reflection, reframing?		
Context:	Link to theory and academic literature? Constraints identified?		
Content:	Salience of objectives ? Environmental, social, legal, governance and economic aspects addressed? Impact assessment foreseen?		
Outcomes:	Have objectives been achieved? Coherence of reported outcomes? Impacts?		