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**University Teachers as Agents of Change –
the Outcome of a 1-Year Teacher-Training for
Higher Education for Sustainable Development**

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Rationale

- Variety of approaches to implementing *ESD in higher education*
- However, only a few higher education institutions try *to reorient the university's entire educational mission.*
- For doing so and for facilitating a paradigm shift in the curriculum design, *social learning* is seen as a necessary prerequisite (cf. Cramer/Loeber, 2007; Lund-Thomsen, 2007; Keen et al., 2005)
- Learning processes which enable transformative changes largely depend on *academic staff* and their capabilities and willingness to support such processes (Ceulemans/De Prins, 2010; Hegarty, 2008)
- “[...] teachers are at the centre of curricular development when directing it more towards sustainability, because they are responsible for the introduction of the subject of SD to their students” (Ceulemans/De Prins, 2010, p. 646; cf. Holmberg et al., 2008; Lozano 2006).
- Need for learning opportunities and *further education for academic teachers*



Partnership “Teaching and Learning Sustainability”

- *Partners:* Institute for Postgraduate Studies of the Universidad Técnica del Norte (UTN), Ecuador, Institute for Environmental and Sustainability Communication of the Leuphana University of Lüneburg, Germany
- *Objectives:* implementation of HESD in the Universidad Técnica del Norte, exchange of students and teachers, North-South dialogue
- *Funding:* German Academic Exchange Service (DAAD)
- *Key activity:* one-year academic staff development programme “Higher Education for Sustainable Development” which has been implemented jointly at the UTN





Academic Staff Development Programme “Higher Education for Sustainable Development”

- *Structure:* accredited one-year training programme
- *Aim:* dissemination of the concept of sustainability and to train teachers to integrate HESD in their teaching at the UTN
- *First semester:* workload of 480h in five modules: introduction to sustainable development, Education for Sustainable Development (ESD), methods of ESD, virtual learning, Information and Communication Technologies
- *Second semester:* workload of 240h for practical application of the learnt theoretical concepts in own study courses accompanied by two workshops at the beginning and the end of the semester
- *Didactical approach:* blended-learning course designed for self-directed, problem-oriented and collaborative learning, use of the e-learning environment Moodle



Academic Staff Development Programme “Higher Education for Sustainable Development”

- *Methods:* face-to-face seminars with lectures, text reading, group and individual work, discussions, presentations, etc.; virtual learning; realisation of own study courses related to sustainability
- *First realisation* of the training programme from September 2009-August 2010
- *Participants:* 18 teachers from all faculties of the UTN (educational sciences, health studies, engineering, environmental sciences, economics)





Research Focus and Empirical Design

To what extent can such an academic staff development programme support the general implementation process and thus an organisational change towards sustainability?

Sub-questions according to different levels of outcome:

- Which competencies will be developed by the participating staff? (*individual competence development*)
- Does such a staff development programme enable teachers to work in their teaching with the concept of HESD? (*professional performance*)
- To what extent does the staff development programme contribute to the dissemination of sustainability as a cross-cutting topic in the university where it is implemented? (*long-term organisational impact*)



Research Focus and Empirical Design

Explorative case study which consists of three different elements:

- *Three focus groups* (information about both individual perceptions of the programme and its impacts and collaborative aspects)
- *Questionnaire* (detailed individual feedback about the motivation for participating in the training programme and the satisfaction with the structure and realisation of the programme)
- *Analysis of the final papers of all participants* (implementation of the theoretical concepts in the own sustainability-related courses)
- Qualitative analysis of the data based on the coding paradigm of Qualitative Content Analysis developed by Mayring (2000)



Results

Participant's Feedback on the Staff Development Programme

- Generally very *positive feedback* of the participants on the training programme and their personal learning outcomes
- Participants liked in particular the *approaches* and *methods* used during the programme
- Difficulties with using and managing the Moodle platform and sometimes communication problems





Results

Development of the Participants' Knowledge and Competencies

- *Knowledge acquisition:* participants learned particularly more about sustainability (concepts, principles, dimensions, history), environmental problems, approaches and methods of ESD, the development and use of quality criteria as well as competence concepts, competence development as educational objective, and the opportunities of blended and virtual learning.
- *Awareness creation:* teachers have begun to question their existing values, norms and assumptions
- *Competence development:* participants state that they have further developed and improved especially methodological competencies, ICT capacities as well as capacities for dealing with complexity and uncertainty and critical thinking, but also soft skills were addressed



Results

Development of the Participants' Professional Performance

- Opportunity to apply the gained knowledge in real-life contexts and to further develop methodological competencies
- 'Window of opportunity' for a process of learning-by-doing
- More participative learning culture evolved
- Application also in other courses or even other contexts of their work



Results

Organisational Impacts of the Programme

- A number of far-reaching organisational impacts
- Contribution to raising awareness of sustainability and creating capacities for implementing ESD
- The programme's participants contributed in two different roles to organisational changes: as individual members of the organisation and as members of the organisation in official positions or functions
- Informal learning in different spheres and levels of the institution
- Dissemination of sustainability



Conclusion

- The results of this case study highlight the potential benefits of ESD academic staff development programmes.
- Programme as a promoter of curriculum change towards ESD not only by initiating individual learning processes, but also by facilitating social learning
- The results confirm the idea of the competence development of academic staff as an essential prerequisite for a sustainability paradigm shift in higher education.
- However, the question remains of how to reach academic teaching staff members who have not demonstrated an initial interest in participating in such programmes in higher education for sustainable development.



Thank you very much for your attention!

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