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At the bottom lines – student initiatives for sustainable development in higher education

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Summary. During the past few years, numerous student initiatives have been founded, which engage in Sustainable Development (SD) at their university and beyond. Working in such initiatives offers students a remarkable (sometimes self-organized) environment allowing them to generate key competencies beyond the regular curricula. Beside this learning spaces for the individual student, the initiatives contribute to an organizational implementation of SD at the universities itself.

With the description of a self-organized lecture-series of the AG Nachhaltigkeit Erfurt e.V., a good-practice example for the initiatives' achievements is given. The potential of Education for Sustainable Development (ESD) in higher education becomes tangible, especially in innovative forms of teaching and learning, like informal learning. Furthermore, a study of the Cultura 21 e.V. and the "Initiative für Nachhaltigkeit" (Initiative for Sustainability) of the University of Duisburg-Essen (Brocchi 2007) is presented, where systematic data of existing initiatives were collected and analyzed. The study and experience from collaboration with several initiatives reveal a high diversity of interpretations of ESD.

Key-words. education for sustainable development, student initiatives, informal learning, key-competencies, self-organization.

Acquiring key-competencies via self-organization

Student commitment faces increasing challenges since bachelor and master programs were introduced in Germany. Tightened framework requirements, including increased workload and a stronger focus on

teaching programs as opposed to research programs entail a learning culture similar to high-school education. The ongoing formation of new student initiatives – often devoted to sustainability issues – and the professionalization of existing initiatives is – in this context – surprising and remarkable at the same time. The work in such initiatives offers important spaces for the development of key competencies beyond the official curriculum at higher education institutions.

The concept of key competencies, used in this article, refers to the OECD project “Definition and Selection of Competencies” (DeSeCo) (Rychen 2008). Competencies are thereby defined as “the ability to manage complex demands in specific situations successful” (Gnahs 2007: 21-22). This functional, application oriented and holistic competence concept by Rychen and Salganik focuses on cognitive and emotional aspects of personality likewise. It can only unfold in certain content-dependent contexts or so-called “domains” (Bormann and de Haan 2008: 9). The ability to manage complex projects or to develop a funding proposal can be considered as an important competence particularly for social scientists. This can hardly be developed in a traditional seminar setting but rather within a concrete working context. Taking responsibility for project management and funding within an initiative therefore offers opportunities to acquire key competencies by means of self-organization.

This is also due to the characteristics of these sustainability initiatives. In contrast to political initiatives of established parties, church initiatives, and union-based student organizations, many initiatives in the field of SD have not developed strong structures. In most of the cases they are young and characterized by a high extent of self-organization.⁸ The members of such initiatives strive for results without preferring a single ideological concept, since the concept of SD is undogmatic (Hauff 1987). Starting points on the campus may be the promotion of fairtrade products or the organization of lecture series. Crucial determinants for the choice of the approach is both the highest expected impact and the prospects for a smooth implementation.

The student initiatives for sustainable development define their own goals, choose proper methods, and evaluate their achievements (Brocchi 2007). Collaboration occurs with partners in the administration, pro-

⁸ Except for the internationally organized initiatives (AIESEC, Oikos or Sneep). For those networks structures are established which determine the institutional framework of a new regional chapter. The usefulness of those structures should not be questioned at this point.

fessors, companies, banks, other non-profit organizations and initiatives. The aspect of self-organization is not only characterized by structural autonomy of many initiatives, but has an important impact on the kind of competence acquirement of the students, too. Since the initiatives work like small enterprises, a variety of analogous action fields are shared by a few staffers: the conception of press releases for events within the “staff unit Communications”, fundraising (Brocchi 2007: 11) within the “staff unit Public Clients”, the acquisition of new staff members within the “division of Human Resources”, the development of new concepts within the “staff unit Corporate Development”, and last not least management and decision-making. In this environment, competencies can be trained and employability is presumably increased.⁹

The gap between the proverbial “ivory towers” and the working context is reduced by the impacts of the initiatives. The members of the initiatives develop competencies along the same line which is discussed within the global ESD discourse: they learn to manage uncertainty (Lorenz 2008) and complexity (Herget 2008). In an interdisciplinary way (cf. Godemann 2007) and on the basis of collaboration (Brodowski 2006, 2009) they generate problem-orientated strategies for their projects. Even though self-organized work can be considered an obstacle to efficiency of the initiatives, there are positive effects with regard to participation and competency development. The aim of ensuring the initiatives’ success is to provide students with problem-orientated abilities. Thereby, the members of the initiatives have the experience of higher-order-learning (Bateson 1981): Not only do they incorporate factual knowledge, but most importantly, they gain knowledge about themselves, of how to have an impact on society and acquire knowhow in order to solve complex and multidimensional problems. This multidimensional and higher-order-learning requires an applied culture of reflection. In a cooperative process, the students are enabled to reflect their previous learning strategies, their recent ones as well as potential problem solving approaches for similar challenges (Agyris and Schön 1999; Bateson 1981).

The impact of these initiatives on participants is not only the advancement of *hard* competencies with direct job relevance, such as punctuality, proactive action, decision-making competence, competence of organization and reliability. They also strengthen *soft* competencies

⁹ While employability is one of the main aims of the Bologna Process, many universities are still lacking convincing concepts of development of employability.

like value based working, social competence, communication skills, motivation and identification with their own work. These qualities are mostly adopted informally and *en passant* in a concrete working situation. This is one reason why regular courses and ex-cathedra teaching aren't suitable for the development of such soft competencies. Ultimately, that's why the efforts of introducing and implementing Education for Sustainable Development (ESD) are accompanied by a plea for alternative didactical arrangements and action-oriented methods (i.e. the so called "enabling didactics" – in German: Ermöglichungsdidaktik – Arnold and Schüssler 1998).

In order to illustrate the foregoing theses, the example of a self-organized course of the working group "Nachhaltigkeit Erfurt e.V." is presented below.

Grasping ESD – a course at the University of Erfurt

The working group Nachhaltigkeit Erfurt e.V. is a collegiate unincorporated association at the University of Erfurt. Its main objective is the implementation of the concept of SD into campus management (for example green procurement) and to make a sustainable lifestyle socially desirable among students. While designing and implementing projects the members are initiators of a collegiate organized course in terms of ESD.

The inter- and transdisciplinary seminar "Sustainability as a challenge for the future" was organized for the first time in summer 2007. Its goal was to position the under-represented issue of SD within the university and to motivate interested students for self-organized work and commitment in this context. After eight years, it can be noted that the aims have been achieved and widened. Henceforth, the course has become a permanent part of the course offerings of the university, and the initiative has been able to gain numerous new members. Nowadays the course takes place in cooperation with many local partners (i.e. schools, the communal administration, educational organization etc.) and is oriented at the concept of service-learning (Alten Schmidt et al. 2009). For this reason the student commitment is much more oriented at the needs of the partners (e.g. designing an internet-platform for sustainable consumption in cooperation with the local administration).

The seminar aims at providing future experts, teachers, decision-makers with the above mentioned competencies in project groups and to win them as multipliers for ESD. For the implementation of ESD, the training of teachers is crucial and often discussed in this context

(Schneidewind 2009: 254). The module “Studium Fundamentale” (general studies), in which the seminar is located, is interdisciplinary and therefore open to students of all disciplines. The participants of the self-organized course in the last semesters mainly consisted of prospective primary school teachers, communication scientists, educational scientists as well as sociologists and political scientists. During the past semesters the participation in the seminar was approved with credit points from the module Studium Fundamentale. Furthermore, the organizers get extra credit points by the university..

The seminar is structured into self-organized project teams with one coach for every team. Different project groups are offered to the students with different subjects, for instance solar energy in primary school, a city walking tour with a critical view on globalized production and consumption, or the organization of a conference on sustainable development. Another team documents and evaluates the ongoing course and arranges the upcoming semester. The seminar is structured as follows:

1. Introductory lectures with nationwide-known speakers
2. Practical work within the project teams in schools and educational institutions
3. Summit meeting for exchange of experiences/results between the projects
4. Project phase II
5. Final presentation and assessment of the results by an oral examination with the coaches
6. Scientific report about the seminar process, the acquired competencies and the implementation of ESD in the respective, special field.

Considering the perspective of educational sciences, the course provides an interesting line-up for so-called “situational learning” (Lave and Wenger 1991). This theory shifts the main focus from the teacher to the learner, who, first of all, has to negotiate the meaning of a learning situation. Accordingly, a mere knowledge transfer from teacher to learner is very restricted. The learner has to develop personal identity and options of participation in a social context. For situational learning, the organization and quality of interaction plays a key role for successful learning processes.

The self-organized projects provide learning conditions, which comply with the demand of situational learning. The realization of the real-life projects requires a high degree of problem-solving competence which

increases at the same time the probability of self-intended competence acquisition. Beyond this, the theory-practice transfer is improved which is often of great concern with the students. The transdisciplinary orientation of the course let students work together with sponsors, politicians, educational- and administrative staff, as well as scholars of primary and secondary schools. Within the project groups, they are exposed to varying non-academic settings and must cope with the respective working processes of the external partners.

In addition, the process of informal learning within the project groups is remarkable. The comparison of the self-organized seminar and the common courses (lectures, seminars with ex-cathedra teaching) reveals the different roles of the students. During a lecture, they hold the role of knowledge recipients. Knowledge mainly is assigned in a top-down process, whereas, within the self-organized project, groups of students are active and formative.

The increase in informal learning is shown in figure 1. The framework is given by the varying academic learning settings and the respective interaction structures, namely the lectures, oral and written examinations, discussions with lecturers in seminars and the self-organized work in the project groups.

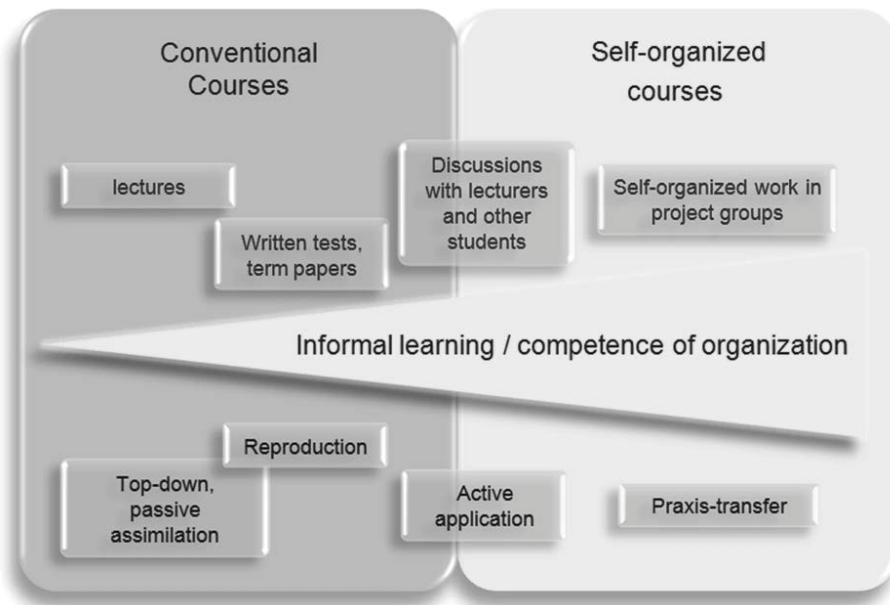


Fig.1: Model of informal learning (© Bever, Haase, Singer-Brodowski, Thiering, Kehler)

The course described is unique in Germany since the students organize their own courses for credit points. In contrast to previous concerns, they are ambitious regarding the organizational quality and the scientific content of their work. In the beginning, the working groups agree on a reader, which is, in combination with the general lecture of ESD experts, a theoretical foundation before starting with the projects. The latter provide the theory-practice transfer whereas the final meetings with the coaches (from academic or non-academic background) ensure a retrospective consideration of the individual learning process, besides the formal aspect of grading.

The course described is not only a good practice example for interdisciplinary, participative and cooperative learning in the context of ESD, but also contributes to the development of methods as claimed by Pim Martens for sustainability science (2007). These new methods are supposed to have the following characteristics:

- “1. demand-driven rather than supply driven
2. participatory rather than technocratic
3. exploratory rather than predictive
4. subjective rather than objective
5. uncertain rather than certain“

(Martens 2007: 54)

This paradigm meets the demands of a global knowledge society as well as the need for a sustainable policy and civil society. In this context, the descriptive character of sciences is supplemented by a normative aspect. Furthermore, objectivity of sciences is challenged within the projects and its usefulness is discussed against the background of the practical experience from the projects.

Initiatives for SD at German-speaking universities – a survey

As well as in the course described above, students who are engaged in student initiatives for SD at their Universities, gain broad competencies in organization, project management and communication. Therefore Universities are specific learning spaces.

“Universities are potential pioneers of sustainable development, laboratories of society and factories of futurity. They are places of culture, where the knowledge of a whole society is organized, developed and

communicated, where people are educated, where political and economic processes are critically reflected and creatively formed”
(Brocchi 2007: 5).

In order to gain a broader knowledge about the aims, structures and characteristics of the sustainability initiatives, Davide Brocchi (Cultura 21) and members of the Initiative for Sustainability undertook the survey “Initiatives for sustainability at German-speaking universities”. The selection of initiatives followed a broad interpretation of SD. Thus, for example the initiative “Bicycle and Traffic” of the University of Braunschweig, the initiative for critical sciences of the University of Düsseldorf or the initiative against tuition fees were included. “Not every initiative related itself to the title ‘Initiatives for Sustainability’, which is already one result of the survey” (Brocchi 2007: 5).

Altogether, 24 initiatives were included in the study, 53% of those contacted. Core target groups were groups like “oikos”¹⁰, local Initiatives for Sustainable Development, the Initiative “Psychology for Environmental Protection”¹¹, “sneep”¹² and the umbrella organization of the initiatives in Lüneburg.

It is striking that 65% of the initiatives were relatively new, with a founding date after 2003. The UN-Decade of Education for Sustainable Development seemed to have a good influence on the establishment of new sustainability initiatives, particularly in higher education institutions, where deficits in the integration of sustainability topics were observed. The initiatives involved over 1156 students as members, more than half of which are female. Most of the members belong to the field of social sciences and aim for a degree of an economist, social, communication or political scientist. Natural scientists and environmental scientists, respectively, are hardly represented. This result can be found in other German surveys on student engagement as well (HISBUS 2006: 18) and may be linked to the higher demands of natural sciences.

However, asking for the relevance of the four dimensions ecology, economy, social welfare and culture, most initiatives defined ecology as the most important one (Brocchi 2007: 8). As can be seen from the example of other groups of the *sustainability movement*, the incentive

¹⁰ International student organization for sustainable economics and management www.oikos-international.org (27.03.2013)

¹¹ IPU = Initiative Psychologie im Umweltschutz, www.Ipu-ev.de (27.03.2013)

¹² Student network for ethics economics: www.sneep.info/ (27.03.2013)

seems to come from the environmental movement. The cultural dimension (e.g., in the sense of sustainability communication) was ascribed the lowest relevance.

The aims of the initiatives are divided into two categories: inward- and outward-looking perspectives. The consolidation of voluntary engagement at the university (HU Berlin) or the support of fair trade and ecological agriculture (Fair Trade Point Konstanz) constitute a good example for this. Another differentiation refers to general aims, like the implementation of SD in all sectors of the university, and special foci, like the organization of lectures.

As can be derived from those aims, the activities of the initiatives are diverse in nature. They comprise information events, lectures, congresses, seminars and panel discussions as well as projects such as canteens with fair trade and bio products, green procurement or renewable energies for the university¹³. The students often use their professional background as starting point for their plans. The different target groups of the initiatives are also diverse. They include other students, lecturers, citizens, NGO's and politicians.

An important result of the survey is:

“The potential for a critical (self-) reflection of the University and its scientists, as well as for political participation of students is still high.”
(Brocchi 2007: 14).

Nevertheless, the engaged students have to cope with huge barriers. 63% of the respondents identify lack of time as the most serious problem for ensuring effectiveness of the initiatives. This lack is caused by a higher percentage of students having to work besides their studies and is also a side effect of the Bologna implementation, as the heavily structured curricula leave less flexibility, time and space for student engagement (Brocchi 2007: 11). Further problems are lack of personnel, insufficient collaboration with the university administrations and a lack of funding opportunities.

Similar obstacles were found by an international study by Spira (2012). He analyzed student initiatives for sustainability from Australia,

¹³ The study does not mention an interesting project named “UniSolar”. Students organize the realization of a solar power system at the universities. With a credit, other students, members of the university and interested citizens participate in the project. After Leipzig, students are involved in Berlin, Karlsruhe and further German cities in “bringing the sun to the roof”. (e.g. <http://tuuwi.file2.wcms.tu-dresden.de/cms/index.php/unisolar-start>, 10.12.2015)

the United States, the Netherlands, Great Britain, Germany, China and South Africa. The main challenges for the student initiatives were:

(1) finding members and engaging leaders, (2) access to and management of knowledge, (3) time restraints of the members, (4) missing resources for funding projects and (5) the development of an effective internal organization. While the hurdles regarding the internal organization of the students initiatives can be removed by ongoing network activities and professionalization through extra-curricular courses¹⁴, the problem of missing resources for funding projects is rather a structural one.

This last point is especially important, as student initiatives are perceived more and more as change agents for organisational and institutional transformation processes at the Universities (Drupp et al. 2012). At the University of Tübingen the student initiative “Greening the University” convinced the university administration to start the implementation of an ecological management system.

Increased collaboration between the initiatives might at least reduce some of the barriers.

Slumbering potential – Collaboration across borderlines

The survey provides an orientation regarding the scene of initiatives concerning SD. It does not ask for completeness, as not every initiative replied. The initiatives included, however, may be assumed to constitute a subset with increased interest in collaboration. In fact, diverse bi- or multilateral contacts and collaboration between the majority of these initiatives existed. Since 2010 a network of student sustainability initiatives exists, that tries to combine the interests of big networks and little local initiatives. Motor of the collaboration was a research project for the German’s national council for sustainable development “sustainable event management” (2008-2010). Three initiatives worked together over two years and realised a qualitative and a quantitative study, and in addition the conception, organization and the evaluation of a sustainable festival (Lebenslust-Festival).

Through the voluntary work the members of the initiatives experienced the relevance of the starting network, while they talked i.e. about

¹⁴ A promising attempt in this direction is the project „Wandercoaching“, which aims at the professionalization and the strategic orientation of sustainability initiatives in Germany. (www.netzwerk-n.org/node/47, 10.12.2015)

their own finance strategies, local project ideas and the importance of gaining the support from the universities top management.

For this reason the three initiatives of the first hour decided to organize a wider network of student initiatives and started with the formulation and publication of a position paper. In October 2011 the network organized a conference on student commitment in the field of SD at the University of Hildesheim. Since 2012 the network has designed and realized a bigger project with the aim of empowering student initiatives to start the structural implementation of SD in their universities, the so-called *wandercoaching*¹⁵.

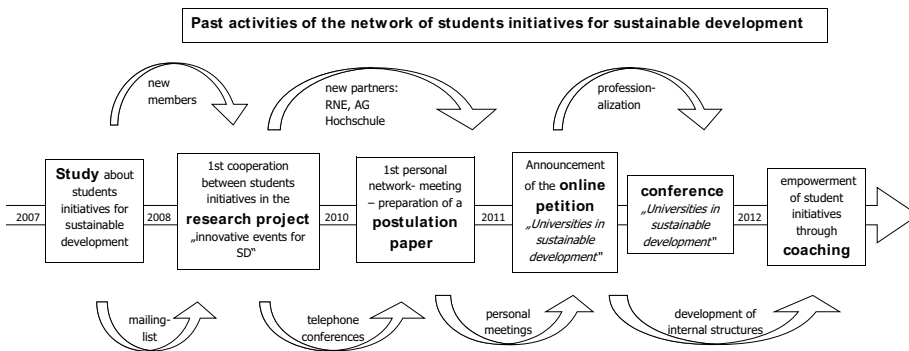


Figure 2: Formation and development of a nation-wide student network for sustainability initiatives

Conclusions and demands

Student engagement in the field of SD can contribute intensively to the individual competence development – a central aim of the Bologna-Process. Through the informal and self-organized project-groups in students sustainability initiatives or project-oriented courses the students learn to cope with complexity, interact in heterogeneous groups or plan and realize a project. Therefore, student organized courses and students self-organized initiatives should be supported by the University's Management Board, i.e. through the recognition with ECTS. This is the case at the University of Erfurt, where a student organized course for SD exist since 2007.

¹⁵ For more information: www.netzwerk-n.org/node/47 (10.12.2015)

Furthermore a study about student initiatives for SD was the starting point of a broader cooperation between different sustainability initiatives. The nowadays existing network of student initiatives spreads best practices of project-ideas and focus' on the improving of students commitment condition. That's why it contributes to development of competencies in a wider sense. On the hand it supports the learning processes of the network members in organizing the network and facing complex challenges. On the other hand it tries to improve the conditions of other student initiatives for sustainability and is therefore a multiplier for ESD and SD in general.

The discussion of competence development through social commitment, the good-practice examples of the initiatives can be summed up in some demands concerning the European policy for higher education. At the level of the universities, the participation of students in curriculum development has to be strengthened. Since employability could be increased by the ESD approach, the universities' should be encouraged to create more space for such new forms of learning. The processes of competence acquisition are decisive for the learning biographies of the students and may result in professional careers based on their social commitment.

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