

The International Practices of ESD Integration
Into Teacher Training Programms
Mongolian National University of Education, Ulaanbaatar, 24/25.11.2015

UBINOS
UNIVERSITÄT
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**Teacher Education for Sustainable Development (TESD)-
Experiences and Perspectives in Germany**
„From project to structure“ – From personal commitment
of individual scientists to Sustainable Universities

Looking back and moving forward!

1. What does 'Education for Sustainable Development' (ESD) imply?
2. Seminars in Pedagogy on Environmental Education (EE)/ ESD (1978-2011)
3. Non-university practice of EE /ESD (1985-2015 ff) (Transdisciplinarity)
4. TSED at universities in Germany 1992-2005 – an interim balance
5. Strong impetus by UN-Decade ESD (2005-2014)
6. Global Action Programme: Goals and immense challenges for all universities (conclusion)

Annex: Sustainable universities: Examples, Literature,...

Text of a lecture (long version) - Download <http://www.bne.uni-osnabrueck.de/Becker/LBNE>

Dr. Gerhard Becker, UBINOS, c/o Osnabrück University

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Ladies and Gentlemen,

First of all, I would like to thank the Mongolian National University of Education for having invited me and giving me the opportunity to present my position on the subject based on my experience during nearly 40 years within the field environmental education /ESD.

Neither in Germany, nor at International level there is a consistent definition of ESD. This is why I shall start my lecture with the question of how I define ESD, being the precondition for an exact understanding of the following presentation and for subsequent discussions.

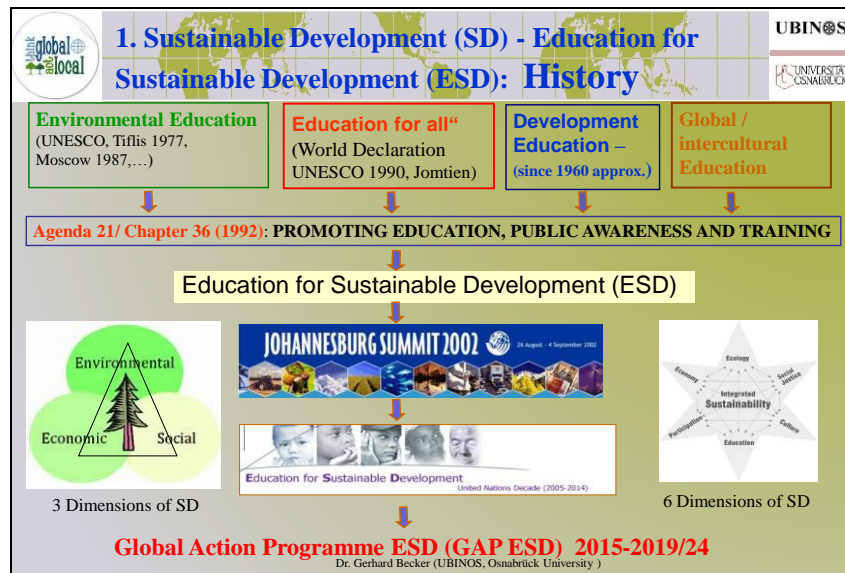
In part 2 and 3 I shall report on my practice at university level, closely linked to projects and educational work outside the university area. My own experience gained over many years and strong personal commitment should be regarded in an exemplary manner, considering the fact that many other colleagues worked in a similar manner and shared similar experience.

Part 4 and 5 refer to the situation in Germany and the strong positive impetus given by the UN Decade ESD. This leads to formulating necessary consequences which were also taken up by the Global Action Programme ESD (Part 6).

The general concern of my lecture focusses on the following: For a continuous implementation of ESD into university, basic strategic and structural questions will have to be discussed and solved. In Germany, this objective is formulated briefly as „from project to structure“. Such a strategic form of orientation is also expressed in the new Global Action Programme 2015-2019.

Teacher Education for sustainable Development (TESD)] on its own is quite a complex subject and will become even more complex when discussed and implemented within the context of the general issue "sustainable universities" from which it may not be detached. In fact, what also needs to be considered is the social overall context, i.e. National or local educational policies on one hand and policies for sustainability at different level on the other. Due to the limited time of my lecture, I can only refer to some of the numerous single aspects of this complex subject and only in a very brief manner.

For this reason, the foils also contain information that goes beyond the oral presentation as well as an annex with the examples of two universities and literature references. This extended version of the presentation may be downloaded after the conference. You'll find the web address at the end of the foils (Nr. 20).



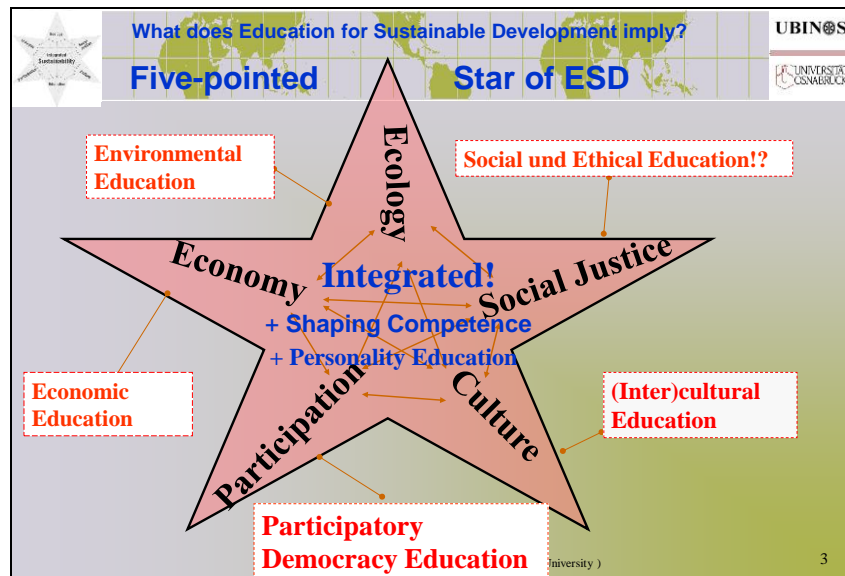
Education for sustainable development – just like the idea and its different theories and concepts - looks back on a diverse historical development which led to different forms and characteristics in different regions and countries.

With reservations and differences in time, there are mainly four precursors of ESD as mentioned on the foil above. Originally nearly detached, they still preserve certain independency today. This gradually changed with the Agenda 21 in 1992 (Rio de Janeiro). It was the clear intention of the UN-Decade ESD to enhance this integration and thus ESD world-wide. For the time after the Decade, a global action programme has been launched meanwhile in continuation, with the objective to carry on with the process of integrating the different historic pedagogical concepts and to implement these into further fields of education in which ESD was so far underrepresented. I shall come back to this issue at the end of my lecture.

ESD is not a particular pedagogical orientation or task amongst others, but rather a general principle for all educational work in all fields of education, also in non-formal or informal areas of education (e.g. public relations or leisure time).

What then, does ESD really imply?

A very common and widely spread concept is the idea of three-dimensionality (see graphics on the left), i.e. the idea that sustainable thinking and action are characterised by their attempt to always consider simultaneously ecological, social and economic aspects. This is directed against all one-sidedness that led and still leads to the urgent problems of our world, i.e. the fatal consequences of a purely economic "delusion of growth" which entailed ecological, social and also economic catastrophies world-wide, in particular the climate change and the problems occurring in connection with the refugees. Therefore, not only I am convinced that education, culture and political participation form part of the decisive dimensions of sustainable development. This is why I suggested as early as in 1997 in a lecture to consider at least six dimensions (see graphics on the right), an idea which I continuously supported in all publications and seminars. More details will be presented on the following foils.



6 dimensions for sustainability, this implies that ESD is not only related to 3, but to 5 dimensions. In substance, the German UNESCO holds a similar theoretical view –although only implicitly.

Nobody will seriously dispute the fact that sustainable development must always include the area of culture. This becomes particularly evident in the case of international problems but also within most multi-cultural societies.

The same holds true for participation which is a decisive basic element of all resolutions of the UN (e. g. Agenda 21, 1992 in Rio den Janeiro). All experience proves anyhow that sustainable development without democratic principles will not succeed in the long run. The individual dimensions rank traditionally among the tasks and objectives of all different kinds of pedagogical orientations (environmental education, social education, moral education, (inter) cultural education,) which have been existing since decades and turned out to develop into a certain autonomy. In the age of education for sustainable development it becomes more and more obvious that we are challenged with the difficult task to integrate all these pedagogical orientations or at least to consider them always from the context of a more comprehensive sustainable development.

The „Star of ESD“ should always be seen as an ideal-typical model which offers orientation for practical work. The higher number of dimensions in comparison with the three-dimensional model gives more and more exact ideas and impetus for practice, e.g. at university, at school or during an international Youth Exchange, but also for public relation work of institutions on subjects of sustainable development.

It would be, however, a big didactical misconception if one thought it to be necessary to implement the 6-dimensional (or even only the three-dimensional) claim during each educational task or to expect this from students' presentation at university, short teaching projects at school or of each activity during a Youth exchange visit!!! This claim is related to larger, pedagogical units, e.g. an entire seminar at university, an annular curriculum at school or to the entire International Youth exchange programme!



Objective of ESD: Shaping Competence!!
(in German: Gestaltungskompetenz)

Shaping Competence is the ability to apply interdisciplinary knowledge (Ecology, Economy, Culture, ...) of **sustainable development**, to identify problems of unsustainable development as well as to be able to draw conclusions for individual and common behaviour and action in all areas:

- everyday life,
- School, Professional /Vocational Training and Education,
- Professional Work,
- political action at local, national, international and global level.

Shaping Competence: 12 Key Competencies for ESD
(most common in Germany) →


Learning for Sustainable Development and Learning *as* sustainable development!

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In addition to the matter of contents, the „shaping competence“ is of utmost priority of ESD. This term was coined in order to express the basic aspect of comprehensive participation in sustainable development. Without such a competence, no democratic development of the world will be possible; neither will sustainable development succeed in the long run without the voluntary participation of each citizen. Here, it should be differentiated between different fields of action or levels, respectively, starting from private action in everyday life up to different levels of social action up to the global level.

During the conceptional debate on the necessarily very general formulation of the term, different lists of partial competences or key competencies are being suggested. In the following foil I shall present a list of those competencies which are most common in Germany.....

The orientation towards practices of action by shaping competence as a central target and the integration of ESD into practice of action shows that ESD always also implies learning **as** sustainable development.



Shaping Competence:
12 Key Competencies for ESD

1. Acquire knowledge with an **open outlook on the world** and the ability to integrate new perspectives
2. Think and act in an **anticipatory** manner
3. Acquire knowledge and act in an **interdisciplinary manner**
4. Ability to identify and reflect on **risks, threats and uncertainties**
5. Ability to plan and **act together with others**
6. Ability to reflect on action strategies and **goal conflicts**
7. Ability to be part of **decision making processes**
8. Ability to motivate oneself and others to get active
9. Ability to reflect upon one's own **(cultural) principles** and upon those of others
10. Ability to reflect on questions about **equity** and to use it for decision making
11. Ability to plan and **act autonomously**
12. Ability to show **empathy and solidarity** with disadvantaged

didactic implementation in TESD and School !?


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This list was developed by Prof. G. de Haan from about 1998 onwards within the frame of a school-related project on the introduction of ESD into schools (Transfer-21) in which in the end (2008) participated 4000 schools from Germany. First of all the shaping competence consisted of 7 partial competencies, later these were further differentiated. In Germany, this approach is widely shared, has been taught for many years by those colleagues who train teachers, is being disseminated in publications and often used in didactics in practical school teaching.


Still there are also other, although similar lists of competences, above all from the field of Global Learning as variation of ESD.

Competences 4, 6, 9 and 12 are of special interest, because they are less spread and known. In particular in the age of globalisation and an increasing number of refugees world-wide, competencies 9 and 12 increased largely in importance.



2. My Pedagogical Practice 1978-2012:

from Environmental Education to ESD



Overview:

fundamental conflict with the Institute of Pedagogy of University Osnabrück

- Since 1978: each semester, an **increasing number of seminars/courses/lectures** on different pedagogical aspects of Environmental Education (EE) on basis of a **social critical, sociocultural concept**
- Since 1985 approx: Regular cooperation with projects on education practices with non-university partners – **Advanced Teacher Training** (see foil in Part 3) ➔
- Since 1990 approx: **Regular study courses** „Environmental Teacher Education” (School Pedagogy, General Didactics, General Educational Theory, practical projects) within all my courses/seminars,... (**Study programme EE**)
- 1990: Development and establishment of **my own scientific discipline** „Environmental Education” within the **Institute for Pedagogy**
- Since 1992: **Conceptual progression of the study programme on the theoretical basis of ESD** ➔
- Since 1995 approx.: **Nationwide networking, for example in DGfE (Deutsche Gesellschaft für Erziehungswissenschaft = German Educational Research Association)** ➔

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After the completion of my doctoral thesis in education, I decided to generally change my teaching and research activities at the Faculty of Education and Cultural Studies at the University of Osnabrück and started in 1978 to offer the subject 'environmental education' for teacher students (and other students in education) . Soon this subject developed into the new focal area of my work.

Simultaneously, I started to develop practical projects in environmental education outside the university area, to cooperate with other similar projects and to offer services derived from these activities to Osnabrück schools. Later on, the issues of these projects were also dealt with in offers for teacher in-service training. At the same time I tried to combine these projects with university teacher education, i.e. to organize seminars with direct relation to the practice.

From 1990 onwards, I completed the design of an entire study programme on environmental education that I developed later into the direction of ESD. Unfortunately, I was confronted with the problem that the majority of my colleagues from the education department rejected such an orientation towards environmental education and later ESD and tried everything possible to prevent my respective work. Nevertheless, my work in the field of environmental education was a full success all the same. With strong support by other faculties and the Rectorate of the University it was possible to implement my teaching offers as official parts of the teacher training study course. However it was not possible for me to assume a professorship as professional career at my Faculty.

The aspects non-university cooperation and in-service teacher training, study programme environmental education/ESD shall be explained in more details later on in separate foils.

Example: Course „Education for Sustainable Development“ (SS 2011)

Presentations of students after an introductory lecture on ESD from the background of educational theories with practical exercises (6 weeks approx.)

- The UN-Decade ESD – Examples from the extra-curricular field
- The UN-Decade ESD– International examples
- Is nature-adventure oriented and eco-ethical environmental education in the context of sustainable development out of date?
- ESD and global and intergenerational justice
- On the discrepancy between awareness of sustainability and action
- ESD and knowledge-based society,
- ESD at school – results of the national Transfer-21-Project (4000 schools)
- ESD in subject matter specific instruction (choose one's own study subjects!)
- ESD-Projects of current local issues/topics in Osnabrück (Research + ped. ideas)
- ...

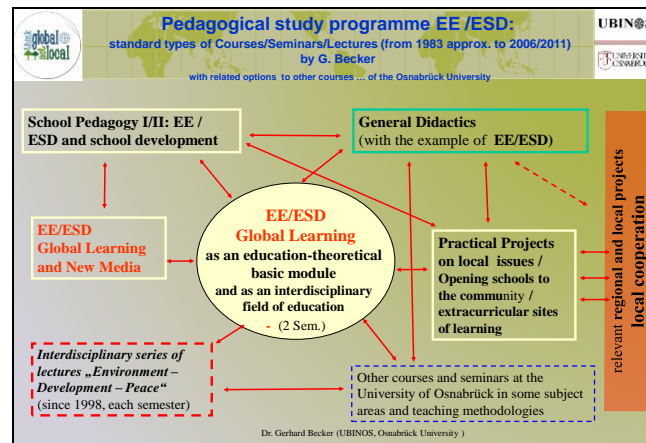
Service: <http://www.nachhaltigkeitsbildung.de>
<http://www.bne-literatur.de> (s. Anhang)

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I shall start with the example of a seminar which I offered to many students during summer terms from 1995 to 2012 at a regular basis. According to the study regulation, this seminar was a course on educational theory: After an extensive theoretical introduction, I also offered practice-related subjects to the students for their independent work which – if desired - they also could relate to their individual disciplinary subjects or to current local issues.

The following subjects are part of the suggestions for the work of the students from this seminar. As support of the students' work and for dissemination beyond the group of participants, I also maintained a website for their service (www.nachhaltigkeitsbildung.de).



Focus of the **overall concept of my curricular offer at that time** was a two-semester module of educational theories „Epochal Key Problems – Education for Sustainable Development“: Contents of the first semester referred to „multidisciplinary fields of study“, e.g. Environmental Education (EE), Intercultural Education, Peace Educationwhich were compulsory seminars according to the **study regulations** and the Education Act. In such a manner, ESD was being dealt with in the second semester as an integrating element of these inter- und multidisciplinary fields of study.

The following aspects apply to the entire **study programme** as presented in the foil: Content-related connections exist amongst this central module and the other courses and seminars. All courses and seminars are general elements of the pedagogical part of Teacher Education studies.

Exemplary seminar „EE/ESD – School Development“: This seminar deals with the subject of sustainability in daily life at school (not only during lessons) on one hand and forms part on the other of the general study field “Theory of Schools, School Development” as compulsory part of studies.

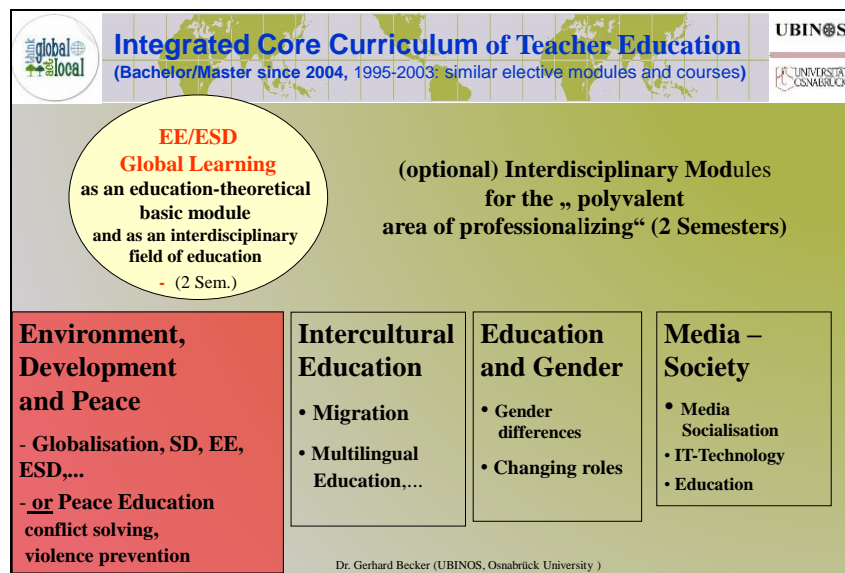
Similar aspects hold true for other seminars from the field Environmental Education or New Media. Last but not least it should be mentioned that the content of my curricular offers is closely related to the practical fields of learning of the region (see Foil 10 below).

During the course of several semesters, students of my courses were able to achieve comprehensive qualifications in the field of ESD closely related to the requirements of general qualification in education.

In my courses, students were motivated to consider the core area „environmental education/ESD“ also in other seminars of their disciplinary studies – if a corresponding offer existed.

An important advantage of my study programme was that all teaching subjects and many disciplinary combinations were represented via the participants in one seminar of pedagogy. In such a manner interdisciplinary studies were facilitated at many occasions as well as the possibility to acquire pedagogical key competences and shaping competences of ESD (see Foil 4 and 5 above), reinforced in particular by my methodological planning of the seminar.

In summary it can be stated that this study programme was primarily guaranteed by my personal commitment, only partly by the study regulations (see also the following foil). The negative consequences implied may be illustrated by my personal experience in Osnabrück since my retirement in 2007: Both of my study programmes of ESD ceased to exist. To save all the work that I invested over many years for the future, I offered the optional compulsory module in form of an unpaid teaching assignment until 2012 which unfortunately did not help to secure the offer of a study course ESD in pedagogy. Since then, ESD is only offered in teaching methodological seminars of some disciplines (e.g. biology, geography). This is why the formulation of the subtitle of this lecture “from project to structure” is so important for guaranteeing the implementation of ESD in teacher education. Similar cases are known by many colleagues of other universities.



From 2004 onwards, the new Bachelor/Master study programme was introduced at the University of Osnabrück according to European recommendations. As in the previous ten years, similar regulations had already been in existence for the interdisciplinary part of studies, no major modifications were made as far as the content was concerned.

The „Integrated Core Curriculum of Teacher Education“ in Bachelor studies forms part of the „polyvalent area of professionalizing“. This part includes several interdisciplinary modules from which the students may freely select one –although participation in at least one of the modules is compulsory – **i.e. optional compulsory modules** (see foil).

One of these modules was „**Environment, Development and Peace**“, which- based on similar fundamentals - was offered in the second semester in two alternative forms: either with the focal point on ESD or on Peace Education.

Needless to say that there is a close connection as far as the content of both alternative seminars is concerned: Sustainable development without peace is impossible and vice versa. Recently, this has become again distinctly noticeable by the increasing problems related to the growing number of refugees from different parts of the world. Also, this correlation corresponds to the before-mentioned concept of ESD by UNESCO. ..

This is also the concept of the Osnabrück Working Group who planned and organized this series of lectures for many years. Local Background for an education for peace is the fact that the City of Osnabrück considers itself to be a City of Peace due to its role at the end of the 30-years' war from 1618 to 1648. That ESD forms part of the content of this module is due to my personal commitment to which I shall refer again with the next foil. Admittedly, studying such a module will not grant a comprehensive qualification in ESD (or in other focal areas of the optional modules) and will have to be complemented by other seminars, both in the pedagogical part of teacher training studies as well as in the disciplinary fields of the teaching subjects. This, however, was not stipulated in the study regulations and was rather left up to the personal commitment of all those who advocate sustainable development and education for sustainable development at the University of Osnabrück!

Since my final retirement from active civil service, ESD is no longer offered in form of a seminar as an optional compulsory module, but only offered in teaching methodological seminars of some disciplines (e.g. biology, geography).

3. Regional/Local practical projects: cooperation with non-university actors/organisations (transdisciplinarity)

Since 1987 Offers of the Association for schools: projects and services in the field of environmental education/ESD. *

- History of environment Osnabrück (NUSO since 1988) www.nuso.de
- Litter and other environmental subjects (PU since 1997) www.pu-os.de
- Energy /climate protection (PE since 2005) www.pe-os.de
- Living „Hase“ (Streaming waters in the city) (since 2002)

Since 2002: Working Group Environmental Education of the Local Agenda 21* : Thematic impetus by annual themes and competitions (s. www.umweltbildung-os.de), amongst others:

- Water, nouriture
- Living and residing in the city
- Nature in the city, mobility
- Change of climate (2016 ff)

Other partners for practical projects, e.g. cooperation with the Environmental Education Centre in the Museum „Nature and Environment“

* official cooperation partner of the University of Osnabrück at regular term

Impetus and 'informal' in-service training for teachers and schools (within the frame of practical projects and services)

+ Regular subject- or project related offers for teacher in-service training

+ Relations to university seminars and exam papers

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Now I would like to turn to a different part of my activities outside the university, although mostly related to it and with special significance for the field of in-service training of teachers.

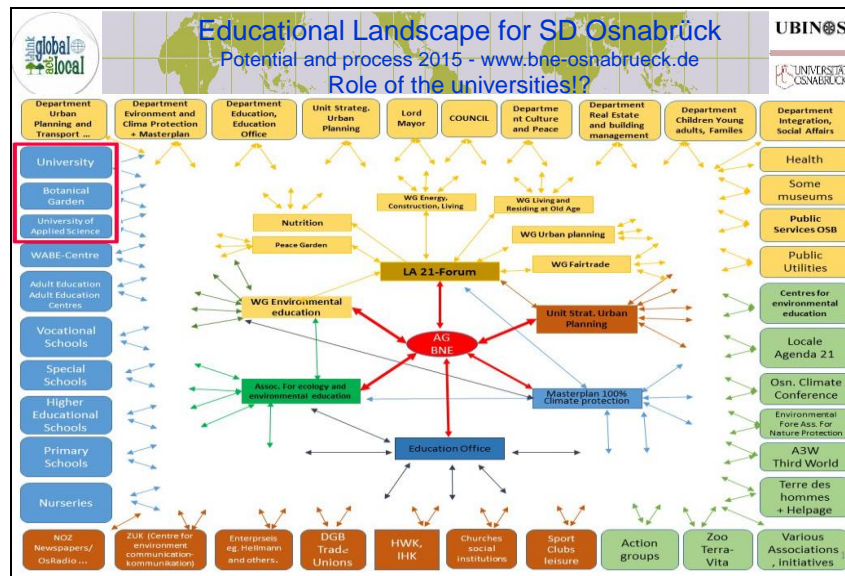
You will see in the foil several associations/organisations to which I was directly linked and continue to be so until the present day: as Speaker (WG Environment Education of the Local Agenda 21), Chairman (Association) or member of the Advisory Council of the Centre for Environmental Education.

For more than 25 years, the first two organisations have been carrying out projects directly dedicated to special themes (e.g. litter, saving of energy/climate protection, flowing waters) and in most cases also offer projects for teachers and schools in Osnabrück to be accepted by teachers at voluntary basis.

Although most projects had to be organized at temporary basis due to their finance by means of foundations, they had a most positive effect on schools and other educational institutions. The results of the projects are presented on the websites and may be used for incentives. This holds in particular true for the projects of the WG Environmental Education which is an open group.

Some projects of the Association managed to receive finance on long-term basis, such as Pedagogical Environmental Advisory Service - PU (=„Pädagogische Umweltberatung“) by the Waste management company of the City of Osnabrück. The same will probably also hold true for the Pedagogical Energy Advisory Service - PE (=„Pädagogische Energieberatung“) by the building and climate management of the City of Osnabrück. As often as 8 times, both organisations were distinguished for their successful work by the UNESCO as „official ESD-Decade projects“ for two years each which gave us considerable impetus and motivation for our work!

At this stage I of my lecture would like to point out that informal and formal teacher in-service training existed here also outside the university context and in relation to it and continues to do so (see right hand sight of the foil). Without these external offers, there would be hardly any offers of teacher in-service training in the field of ESD – an important and generally up-to-date contribution on the development of Osnabrück schools on their way towards ecology and sustainable development.



Since 2013, ESD has assumed a new quality and opens up new opportunities which is also a great challenge for the University and the University of Applied Science. On initiative of both organisations mentioned before (Association and Working Group Environmental Education), the City of Osnabrück succeeded with its application within the frame of the UN-Decade for the distinction as City of ESD. The preparation of the application formalities which were quite time-consuming was carried out mainly by both a.m. organisations under my directive. Essentially, this consisted of a comprehensive stock-taking of the Osnabrück educational landscape for sustainable development including the existing potential and the development of a strategy whose implementation is being attempted ever since (s. <http://www.bne-osnabrueck.de> and my contribution „Landscape of Education for Sustainable Development in the City: Actors, structures and processes in Osnabrück, in: Leal Filho, Walter, Brandli, Luciana (Eds.) Engaging Stakeholders in Education for Sustainable Development at University Level, 2016 (in print)“).

The educational landscape for sustainable development represented here in a simplified manner includes all ESD actors as well as the respective potential in all areas of the City of Osnabrück. To link up this landscape and further develop it is perhaps the task of a century! In such a manner, the organisations figuring in the centre started to build up a democratic process for an educational landscape for sustainable development. The active role of the universities, potentially of great importance and indispensable, still needs to be defined and developed. The same holds true for the field of teacher training in and outside of the university areas as a supportive factor.

The approach of local landscapes of education is being practised in similar forms in other cities and communities in Germany (www.bne-portal.de/kommunen) and also in other countries. Since the final conference of the UN Decade at the end of 2014 in Japan such a communal approach has been generally considered as an important principle, which is why it is also included as one of the five fields of action into the Global Action Programme ESD to which I shall turn in more detail at the end of my lecture (see foil 20)

4. Teacher Education (Training) for sustainable development (TESD) – Interim balance 2004 in Germany

Many actors at universities in subject didactics, above all in biology, geography,... Social studies and Science at school (Primary level) (Sachunterricht) ... and in (school) pedagogy

Many cooperations with non-universitary actors of ESD

First approaches of national linking of actors in form of networks

e.g: DGfE Memorandum for LBNE (2004) - Model concepts for TESP →

Result 2004: many thousand students with more or less solid ESD competences who work as teachers at „regular“ schools! → Lecture of V. Reinke

But: very scarce institutional support or guarantee
(Study guidelines, academic posts for environment education/ESD; ESD sustainability als general principal of universities)

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After my presentation of ESD at the University of Osnabrück and the City of Osnabrück I shall go back one step in time in the 4th part by drawing an intermediate balance of teacher training in 2004 approx., the time before the beginning of the UN Decade ESD which brought great impetus also for the university area.

Similar to the situation of the University of Osnabrück, there are several committed scientists at other German universities who practise environmental education and later ESD within the frame of their institutional possibilities, be it in subject didactics, educational science or via external projects and organisations outside the university area. Gradually, networking and linkage of all activities took place at National, even at International level which first of all served for an exchange of experience. As one result and as a political claim the Memorandum on Teacher Education for sustainable development was formulated by the Commission ESD of the German Society for Educational Science - Deutsche Gesellschaft für Erziehungswissenschaft (DGfE), which was to be developed into a mutual supraregional project (see next foil).


As a positive result it may be summarized that all those many thousands of students in Germany who during their studies had the opportunity to deal with ESD formed a large potential for ESD at schools and at other educational institutions. In which way this potential is being implemented at schools is an entirely different matter; and also depends on the structure of the school and the German school system. But: Before 2005, there were hardly any academic posts particularly designated to ESD, neither did I have such a post. Only very exceptionally, ESD was explicitly part of study and examination regulations. As consequence this implied, that such a curricular offer ended at the moment when the lecturer or professor changed over to another university or retired.

This shows the main problem that persisted until 2005 and in most cases has not even been solved in 2015: the great lack of institutional guarantee and support for ESD in Germany – at university but also at other educational levels.

Strong impetus was given by the UN Decade 2005 to 2014 Notably in Germany where at least a certain general support was offered by a National plan together with the German UNESCO and a stronger general commitment was encouraged by distinction and awards for projects, a total of 2000 and a lot of them from universities. It remains open, however, to decide in which way this support was also reflected at structural level, i.e. in form of posts, study regulations.



Teacher Education (Training) for sustainable development (TESD) – 3 models as examples



Commission ESD of the German Society for Educational Science
(Memorandum on teacher in-service training for sustainable development 2004- www.dgfe-bne.de)

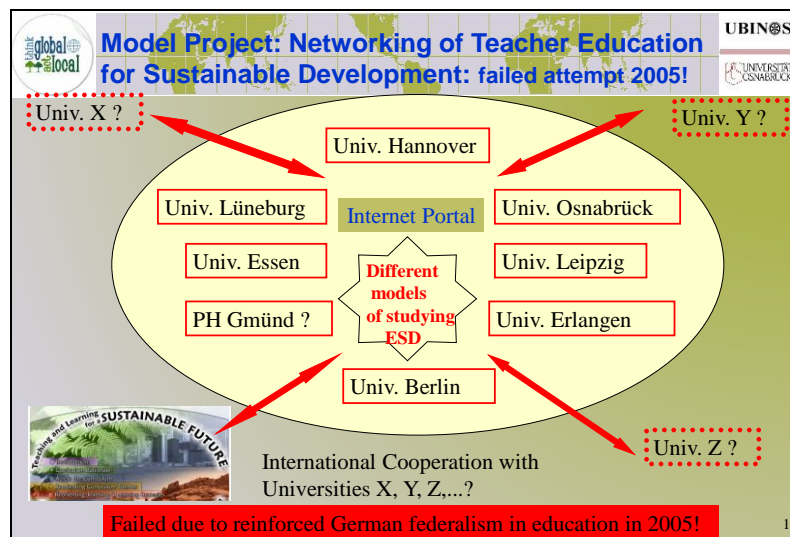
- ✦ **Model I:** Starting off from the first semester the subject „sustainable development“ will be dealt with in a **course-related manner** from different disciplinary perspectives and teaching methodological problems **in one seminar (in every semester)**
- ✦ **Model II:** During the course of a maximum of three semesters within the Bachelor-phase of studies, **project studies** on the subject „sustainable development“ are integrated which may deal with a specific syndrome/key subject in an exemplary manner.
- ✦ **Modell III:** Within the Master-phase of studies, a **study semester** on the subject of „sustainable development“ is integrated in which a commonly defined subject will be dealt with in an interdisciplinary manner. Academics of individual disciplines, teaching methodologies, psychology and educational studies will participate in this study semester in equal shares.

All models are organized in close cooperation with the disciplines of the teaching subjects, **educational studies and teaching methodology and within the frame of a supra-regional model project and competence network of different universities.**

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The Commission Environmental Education/ESD of the German Society of Educational Science which exists since 1992 (Kommission Umweltbildung/BNE der Deutschen Gesellschaft für Erziehungswissenschaft) which unites most academics from the field of ESD, mainly from the field of education and from some subject didactics came up with ideas for establishing ESD at university level as early as in the 90s. In this aspect it was problematic that at their respective universities it was up to most members to realize on their own with great personal commitment all what was possible in their precise situation.

During numerous meetings from 2002 to 2004, this commission drew up a memorandum that presented three different models of studies in an exemplary manner which inspite of their basic differences all suggested the idea of a close intra-university cooperation amongst the participating academic disciplines (see last paragraph of the foil).



A consequence of this memorandum was the cooperative planning of a Pilot Scheme which was to be financed by the National Ministry of Science for about three years. This Pilot Scheme which counted with the initial participation of seven to eight universities (or – to be more exact – with individual persons from these universities) was to provide a network by a joint internet platform in order to facilitate a systematic exchange of experience, an important tool also under the aspect of the very different situations and possibilities of development of ESD at the participating universities. Hardly any university could rely on institutional or structural guarantee of ESD - at least during the initial period which also becomes evident in my own study programme ESD at the University of Osnabrück (foil 8). This was a central target of the Pilot Scheme and I, too, hoped to be able to back up my study programme with institutional guarantee at long-term basis by participating in this supra-regional pilot scheme.


Another objective was to motivate further universities to participate in this pilot scheme later on – also from different countries.

However, a political decision of the Ministry of Education and Science to reinforce the aspect of Federalism in education and science as well as a court decision in quite a different case, incidentally at the same time put a sudden end to the near support by this Ministry. Until the present day, a similar approach has not been worked out.


Not much in this aspect was achieved either by political resolutions on reinforcing ESD at the universities by the Conference of Rectors of Universities and the German UNESCO Commission 2010 or by the endeavours of the Working Group Universities of the UN Decade in Germany (see Foil 16)


At the beginning of the 5th part I would like to recall that the UN Decade ESD formulated highly pretentious targets. These concern:

- On one hand, the key issues of the UN-Decade at local level as listed on the left hand side. At National level, emphasis was certainly put on very different matters.
- On the other, the targets of the decade: in particular under the aspect of „participatory learning“, the (shaping) competencies, but also the practical implementation of the consequences for a different, sustainable future. This aspect which was of particular importance in Germany was also included in my concept of an ESD which I tried to implement within the university area (see Part 2) as well as outside (Part 3). As far as the educational concepts and their targets are concerned (as quoted in the foil on the right hand side), I suppose that there also strong differences at National level. These will probably also become evident during this conference. I suppose that National differences will be even stronger when we refer to the intensity of implementation of the Decade, the respective forms of organisation as well as the role of the state and the non-governmental organisations (NGOs).



5. UN-Decade of Education for Sustainable Development (2005-2014)






Key issues:

- Biodiversity
- Climate Change Education
- Disaster Risk Reduction
- Cultural Diversity
- Poverty Reduction
- Gender Equality
- Health Promotion
- Sustainable Lifestyles
- Peace and Human Security
- Water
- Sustainable Urbanisation

“Education for Sustainable Development (ESD) allows every human being to acquire the knowledge, skills, attitudes and values necessary to **shape a sustainable future.**”



“It also requires **participatory teaching** and learning methods that motivate and empower learners to **change their behaviour and take action for sustainable development.**”

“ESD consequently promotes competencies like critical thinking, imagining future scenarios and **making decisions in a collaborative way.**”

Different national foci and strategies!!

Dr. Gerhard Becker (UBINOS, Osnabrück University)
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Sustainable Development and ESD at German Universities: Documents, Activities, Projects and Organisations during the UN-Decade ESD

- ❖ „WG Universities“ of the German UN-Decade ESD (since 2006, Network)
www.bne-portal.de/hochschule/
- ❖ 2000 awarded projects, stakeholders, cities and municipalities of Decade ESD, also university and student projects : www.bne-portal.de/auszeichnungen/
- ❖ Memorandum of the „WG Universities“ of the German UN-Decade ESD (2007)
- ❖ Declaration of the German Conference of University Rectors (HRK)/ German UNESCO: Higher Education for Sustainable Development (2009/2010)
- ❖ **Forming of Network Teacher Education for Sust. Development (TESD)**
 - ❑ At National and at Federal Regional Level
 - ❑ Network of Students, such as Sustain it!
- ❖ **Forming of Network Sustainable Universities:**
 - ❑ n – Network for sustainability initiatives of Universities (<http://www.netzwerk-n.org/>) (seit 2011)
 - ❑ Virtual Academy Sustainability
 - ❑ Different Publications „Universities for Sustainable Development“
- ❖ www.bne-portal.de (Dt. UNESCO)
- ❖ www.bne-literatur.de (Becker, UBINOS)

Dr. Gerhard Becker (U

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By means of a National plan of the Federal Government, the support of the German UNESCO and in particular with the help of policies of awarding, many things could be achieved during the UN Decade ESD. In particular, many interested and committed persons felt motivated to become active for the benefit of ESD. This also holds true for the area of universities where numerous projects and measures were awarded. In this aspect, the Working Group Universities of the UN Decade in Germany assumed a particular important role which contributed by its memorandum to the declaration by the Rectors of Universities which was of decisive political influence. Also, much progress can be noted within the field of Teacher Training for Sustainable Development, at least in form of networks at both regional as well as national level and information on respective websites.

In future, a stronger impact might also be exerted by my ESD literature data bank, in operation for more than 30 years and published on-line since 2008, which is planned to be extended by more literature in English and in cooperative manner (see information in the annexe).

6. ESD and Sustainable Development as comprehensive challenge for Universities and Science Policy Studies

Goals:

1. Sustainability as guiding principle , Programme, Management:
2. (Interdisciplinary) Teacher Education for Sustainable Development
3. Disciplinary and interdisciplinary educational offers in all study courses
4. University as an enterprise (Eco-Management, everyday life,...)
5. Academic in-service training (at internal and external level)
6. Interdisciplinary/transdisciplinary research on sustainability
7. Regional cooperation (Local Agenda 21, Local Landscape of education, 'Citizens Science', ...)
8. International cooperation and networks
9. Intra-university communication (information, reports,...)
10. Shaping the future development of the university in cooperation (cultural, democratic participation)

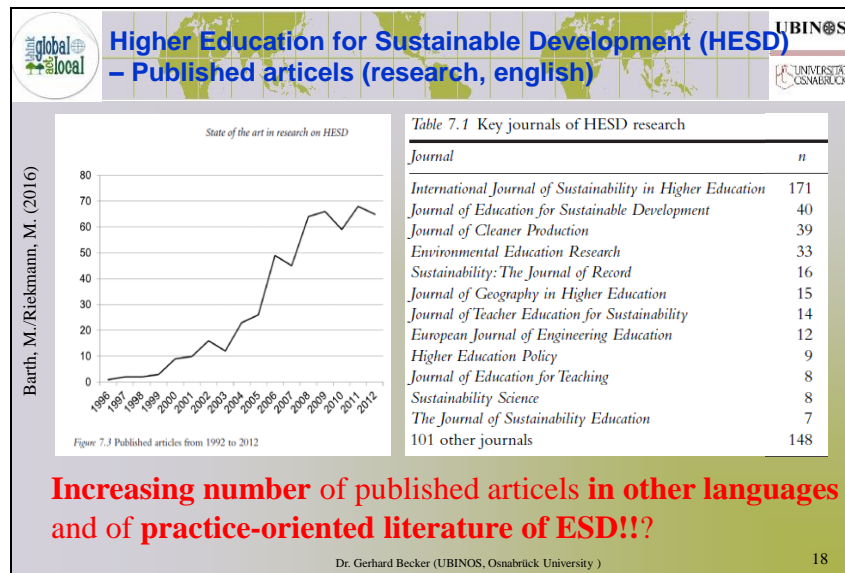
Dr. Gerhard Becker (UBINOS, Osnabrück University)

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In part 6, I would like to refer to the consequences of future ESD at universities. It is not possible to regard the field of Teacher Education for Sustainable Development in an isolated manner as a successful implementation presupposes a gradual transition to a sustainable type of university. The 10 important goals on the foil may be used for a more exact sustainability check and for a structure of more precise evaluations.

I would like to stress the particular importance of a sustainable form of university common life (target 4) which is often left aside. In such a manner, practical new habits and competence will be significantly reinforced in both professional as well as private everyday life. This is closely connected to the participatory target 10 which is contradictory to traditional university structures and hierarchies that are difficult to be changed.

Finally I would like to compare the aims listed on the previous foil with the general fields of action of the Global Action Programme ESD. Soon it becomes evident that the results of the discussions on university education for sustainable development in the UN Decade ESD go very well with the fields of action and targets of the Global Action Programme. Time will show which of these might be implemented into practice during the coming five years, in particular in view of new structures that guarantee further development and securing at long-term basis, especially in the field of Teacher Training for sustainable development.




Interim Balance 2014


- Despite the countless political initiatives and activities as well as practical projects all over the world, ESD is not yet 'mainstream'.
- That's the reason for continuing the UN World Decade as the new "Global Action Programme (GAP)": 2015-2019 (perhaps 2024?).

Dr. Gerhard Becker (UBINOS, Osnabrück University)

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6. UN-Global Action Programme (GAP) Education for Sustainable Development 2015-2019



Priority Action Areas:
To enable strategic focus and foster stakeholder commitment

1. **Advancing policy:** Mainstream ESD into both education and sustainable development policies, to create a promotive environment for ESD and to bring about systemic change
2. **Transforming learning and training environments:** Integrate principles of sustainability into education and training settings
3. **Building capacities of educators and trainers:** Increase the capacities of educators and trainers in order to be able to deliver ESD more effectively
4. **Empowering and mobilizing youth:** Multiply ESD actions among youth
5. **Accelerating sustainable solutions at local level:** At community level, scale up ESD programmes and multi-stakeholder ESD networks

Priority Action Areas for Universities and TESD:

1. **Policies of National universities, Sustainability Guidelines/visions for Universities, sustainability management**
2. **Holistic institutional approach for Universities** (ecomangement, university daily live,...)
3. **Integration of ESD as an interdisciplinary concept in all study regulations/in-service training!**
4. **Training for informal learning/ nonformal youth education**
5. **Local Educational Landscape – Cooperation with Universities**

Dr. Gerhard Becker (UBINOS, Osnabrück University)

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Finally I would like to compare the aims listed on the previous foil with the general fields of action of the Global Action Programme ESD. Soon it becomes evident that the results of the discussions on university education for sustainable development in the UN Decade ESD go very well with the fields of action and targets of the Global Action Programme. Time will show which of these might be implemented into practice during the coming five years, in particular in view of new structures that guarantee further development and securing at long-term basis, especially in the field of Teacher Training for sustainable development.



Germany: National Platform of the Global Action Programme (GAP) 2015-2019





29. September 2015: **Constitutive meeting** of the National Platform:

Expert Forums and „Partner networks“:

- Early childhood education
- School Education
- Vocational Education
- **Higher Education (Universities)**
- Non-formal, informal Learning/ Youth
- Cities and municipalities

„From project to structure“

Awards for

- Institutions,
- Networks
- Cities and municipalities




Click on goals to show targets and topics related to the Sustainable Development Goals as defined in Transforming Our World - the 2030 Agenda for Sustainable Development




Framework for Action.
Towards inclusive and equitable quality education and lifelong learning for all


...
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Let me conclude by taking a brief look at German National policies for the Global Action Programme (Weltaktionsprogramm - WAP). At the Final Conference of the UN-Decade in September 2014, the Federal Government of Germany announced its intention to considerably reinforce its support for the work for the GAP. In their endeavour to swiftly continue their work, the ESD actors, in particular the National working groups of the Decade active in all educational areas, pronounced their claims to the Federal Government. Unfortunately, only reluctantly information is being published by the responsible Ministry of Science on what is planned to be done and supported at National level. New names were given to new structures, e.g. the National Platform (as highest steering body), expert fores (with advisory function), and the working groups will be renamed to Partner Networks. The highly approved awards are to be reserved for institutions, networks, and cities and communities only and no longer granted to single projects like in the UN Decade. Considering the formulation of target, "From project to structure", this is a logical consequence. This is all that can be said or even evaluated after only 11 months since the start of the Global Action Programme,



Thank you very much for your attention!





Universities are like big tank ships, they move slowly and it is very difficult to change their direction (e.g. towards sustainability). Success requires perseverance and strong steering power!

The complete lecture (long text of the speech) may be downloaded at:
<http://www.bne.uni-osnabrueck.de/Becker/LBNE>

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Dr. Gerhard Becker (UBINOS, Osnabrück University)

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Annex




- Sustainable Universities**
 - Lüneburg
 - Osnabrück
- References /Literature**
 - Literature database ESD
 - Biographical note




Osnabrück University

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Sustainable universities: Model of best practice in Germany: Leuphana-Universität Lüneburg



„Culture, sustainability, entrepreneurship, and education – these are the four thematic focuses in research and teaching through which Leuphana University of Lüneburg addresses the future of social commitment to civil society in the 21st century”.

<http://www.leuphana.de>

“Sustainable? Nice word. We fill it with life”.

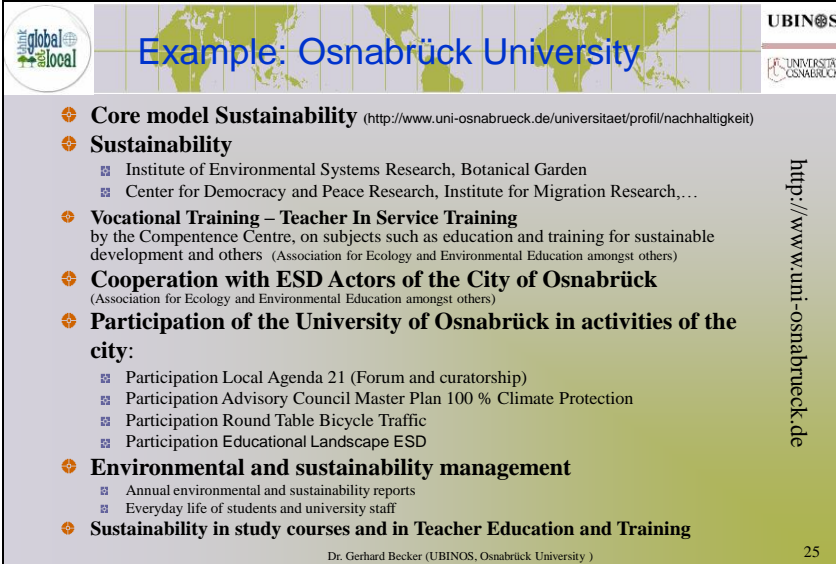
Study structure:

- Bachelor - major**
 - Environmental and Sustainability Studies
 - Environmental Studies
- Bachelor: (Interdisciplinary) minor, e.g.:**
 - Sustainability in humanities
 - Sustainability in natural science
- Teacher Training studies with teaching subjects + pedagogy
- For all students:
 - Introductory **semester** for orientation for students of all study courses
 - “Complementary studies with the possibility of changing perspectives under disciplinary and methodological aspects fachlichen und methodischen Perspektivenwechseln.”

Dr. Gerhard Becker (UBINOS, Osnabrück University)

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The University of Lüneburg (near Hamburg) fulfils to the criteria of a sustainable university best of all in Germany. On the foil only some aspects of a university education are presented for sustainable development. This is only one focus of four.



Example: Osnabrück University

Core model Sustainability (<http://www.uni-osnabrueck.de/universitaet/profil/nachhaltigkeit>)

- Sustainability**
 - Institute of Environmental Systems Research, Botanical Garden
 - Center for Democracy and Peace Research, Institute for Migration Research,...
- Vocational Training – Teacher In Service Training** by the Competence Centre, on subjects such as education and training for sustainable development and others (Association for Ecology and Environmental Education amongst others)
- Cooperation with ESD Actors of the City of Osnabrück** (Association for Ecology and Environmental Education amongst others)
- Participation of the University of Osnabrück in activities of the city:**
 - Participation Local Agenda 21 (Forum and curatorship)
 - Participation Advisory Council Master Plan 100 % Climate Protection
 - Participation Round Table Bicycle Traffic
 - Participation Educational Landscape ESD
- Environmental and sustainability management**
 - Annual environmental and sustainability reports
 - Everyday life of students and university staff
- Sustainability in study courses and in Teacher Education and Training**

Dr. Gerhard Becker (UBINOS, Osnabrück University)

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<http://www.uni-osnabrueck.de>

The official aim of the University of Osnabrück is Sustainability. My university is very good in the area of the organisation and creation of sustainability and Environment (see. the next foils). In the area of ESD and TESD she has fallen back behind the state of 2005 (see. Part 3 and 4.).

Look to <http://www.uni-osnabrueck.de>



environmental and sustainability reports

<http://www.uni-osnabrueck.de/umwelt>

Tipps, Berichte, Flyer

Nachhaltigkeit 2014 Umweltbericht

Umweltberichte

- Umweltbericht 2014
- Umweltbericht 2011
- Umweltbericht 2008
- Umweltbericht 2002

Nachhaltigkeitsberichte

- Nachhaltigkeitsbericht 2006
- Nachhaltigkeitsbericht 2004

Die Umweltberichte der Universität erscheinen alle zwei Jahre. Sie beleuchten und begleiten die Umsetzung des Programms. Dauerhafte Maßnahmen werden nicht in jedem Bericht erneut erwähnt. Wer also einen Gesamtüberblick über die Umweltsituation an der Universität Osnabrück erhalten möchte, sollte auch einen Blick in die älteren Umweltberichte werfen.

Dr. Gerhard Becker (UBINOS, Osnabrück University)

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Download the reports

References /Literature

Book and Articles

Selection of books on the subject Teacher Education for Sustainable Development

BNE-Konsortium COHEP: Didaktische Grundlagen zur Bildung für Nachhaltige Entwicklung in der Lehrerinnen- und Lehrerbildung. Textsammlung. Zürich 2013

Lehmann, Meret; Künzli, Christine; Bertschy, Franziska: Kompetenzen von Lehrpersonen für die Umsetzung von Bildungsangeboten im Bereich Bildung für Nachhaltige Entwicklung. Beitrag im Rahmen der Didaktischen Grundlagen zu BNE in der Lehrerinnen- und Lehrerbildung. o.O. 2013

Competencies for ESD (Education for Sustainable Development) teachers. A framework to

integrate ESD in the curriculum of teacher training institutes. Brüssel 2008

BLK-Programm Transfer-21 <Berlin>: Bildung für nachhaltige Entwicklung in der Lehrerbildung – Kompetenzerwerb für zukunftsorientiertes Lehren und Lernen. Berlin 2007

Haan, Gerhard: de (Hg.): Bildung für nachhaltige Entwicklung in der Lehrerbildung. Kompetenzerwerb für zukunftsorientiertes Lehren und Lernen. Berlin 2007

Rauch, Franz; Steiner, Regina; Radits, Franz: University Course "Education for Sustainable Development - Innovations in Teacher Education" (BINE). Wien 2007

Kyburz-Graber, Regula; Hart, Paul; Posch, Peter (Hg.): Reflective Practice in Teacher Education – Learning from Case Studies of Environmental Education. Bern 2006

Kyburz-Graber, Regula; Posch, Peter; Peter, Ursula (Hg.): Challenges in teacher education. Interdisciplinarity and environmental education. Innsbruck 2003

McInerney, Dennis M./ u.a. (Hg.): Sociocultural influences and teacher education programs. Greenwich 2003

UNESCO: Teaching and learning for a sustainable future. A multimedia teacher education programme Paris 2002

Henze, Christa; Lob, Reinhold E. (Hg.): Bildung für nachhaltige Entwicklung als Herausforderung für die Lehrerbildung. Ergebnisse einer Studie an nordrhein-westfälischen Hochschulen. Baltmannsweiler 2001

Posch, Peter; Rauch, Franz; Kreis, Isolde (Hg.): Bildung für Nachhaltigkeit. Studien zur Vernetzung von Lehrerbildung, Schule und Umwelt. Innsbruck 2000

Schleicher, Klaus: Teacher Training for Environmental Education in Germany. National Trends and Experiences at Hamburg. Hamburg 1996

Selection of books on the subject Higher Education for Sustainable Development

Barth, Matthias; Michelsen, Gerd; Rieckmann, Marco (Hg.): Routledge Handbook of Higher Education for Sustainable Development. London 2016

Competencies for ESD (Education for Sustainable Development) teachers. A framework to integrate ESD in the curriculum of teacher training institutes. Brüssel 2008

Rauch, Franz; Steiner, Regina; Radits, Franz: University Course "Education for Sustainable Development - Innovations in Teacher Education" (BINE). Wien 2007

Kyburz-Graber, Regula; Hart, Paul; Posch, Peter (Hg.): Reflective Practice in Teacher Education – Learning from Case Studies of Environmental Education. Bern 2006

Kyburz-Graber, Regula; Posch, Peter; Peter, Ursula (Hg.): Challenges in teacher education. Interdisciplinarity and environmental education. Innsbruck 2003

McInerney, Dennis M./ u.a. (Hg.): Sociocultural influences and teacher education programs. Greenwich 2003

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Henze, Christa; Lob, Reinhold E. (Hg.): Bildung für nachhaltige Entwicklung als Herausforderung für die Lehrerbildung. Ergebnisse einer Studie an nordrhein-westfälischen Hochschulen. Baltmannsweiler 2001

Schleicher, Klaus: Teacher Training for Environmental Education in Germany. National Trends and Experiences at Hamburg. Hamburg 1996

Deutsche UNESCO-Kommission: Hochschulen für eine nachhaltige Entwicklung. Nachhaltigkeit in

Forschung, Lehre und Betrieb. Bonn 2011

Deutsche UNESCO-Kommission: Hochschulen für eine nachhaltige Entwicklung Ideen zur Institutionalisierung und Implementierung Bonn 2013

Deutsche UNESCO-Kommission: Hochschulen für eine nachhaltige Entwicklung. Netzwerke fördern, Bewusstsein verbreiten. Bonn 2014

Gruppe 2004: Hochschule neu denken. Neuorientierung im Horizont der Nachhaltigkeit. Ein Memorandum. Frankfurt a. M. 2004

Documents on the subject Higher Education und Teacher Education for Sustainable Development

Conference of European Rectors: Copernicus. Charta der Hochschulen für nachhaltige Entwicklung. Genf 1994

Loccum Resolution für Nachhaltige Entwicklung an Hochschulen. Loccum 2000

Deutsche UNESCO-Kommission: Hochschulen für nachhaltige Entwicklung. Erklärung der Hochschulrektorenkonferenz (HRK) und der Deutschen UNESCO-Kommission (DUK) zur Hochschulbildung für nachhaltige Entwicklung. Bonn 2010

Deutsche UNESCO-Kommission: Wissenschaft für Nachhaltigkeit: Der Durchbruch muss gelingen. Ein Memorandum. Bonn 2012

Selection of books and articles of Gerhard Becker on the subject (Teacher)Education for Sustainable Development

- Landscape of Education for Sustainable Development in the City: Actors, structures and processes in Osnabrück, in: Leal Filho, Walter, Brandli, Luciana (Eds.) Engaging Stakeholders in Education for Sustainable Development at University Level, Berlin (in print 2016)
- Bildung für nachhaltige Entwicklung-Interkulturelle Erfahrungen (hg. Gerhard Becker und Nina Dagbaeva), Ulan-Ude, Osnabrück 2009
- Lehrerbildung und Nachhaltigkeit Module und Internetgestützte Kooperation, in: DGU-Nachrichten 29 (2004), S. 22-23
- Lokale Öffnung der universitären Lehrerbildung als Voraussetzung einer zukunftsorientierten Umweltbildung von Lehrern. In: Ev. Akademie (Hg.): Agenda 21 für Niedersachsen. Stand und Perspektiven einer nachhaltigen Entwicklung auf regionaler Ebene, Rehburg-Loccum 1997, S. 312-315
- Interdisziplinarität und Ganzheitlichkeit in der universitären Umweltbildung. Überlegungen und Perspektiven am Beispiel des Lehrerstudiums. In: Balsiger, Philippe; Defila, Rico (Hg.): Ökologie und Interdisziplinarität - eine Beziehung mit Zukunft? Wissenschaftsforschung zur Verbesserung der fachübergreifenden Zusammenarbeit. Basel 1996
- Umweltpädagogische Lehrerbildung und lokale Vernetzung. In: Berliner Forum. Schulische Umweltbildung 1995. Eine Fachtagung des Modellversuchs SchUB, Berlin 1996, S.147-155
- Fächerübergreifende Lehreraus- und Fortbildung als Voraussetzung schulischer Umweltbildung. In: Friedrich, Gudrun / Isensee, Wolf (Hg.): Praxis der Umweltbildung. Neue Ansätze für die Sekundarstufe II. Band I: Ergebnisse einer Tagung. Bielefeld 1994, S. 229-235
- Probleme ökologischen Lehrens und Lernens an der Hochschule. In: Hochschulausbildung. Zeitschrift für Hochschuldidaktik und Hochschulforschung, Heft 3 (1987), S. 149-166
- Urbane Umweltbildung im Kontext einer nachhaltigen Entwicklung. Theoretische Grundlagen und schulische Perspektiven. (2001) + digit. Aktualisierung und Erweiterung 2015 (390 P.)

- Interkulturelle Bildung für nachhaltige Entwicklung in der internationalen Jugendbildung. Theoretische Grundlagen und didaktische Fragen. In: Overwien, Bernd; Rode, Horst (Hrsg.): Bildung für nachhaltige Entwicklung: Lebenslanges Lernen, Kompetenz und gesellschaftliche Teilhabe. Leverkusen-Opladen 2013
- **Other publications of Becker:** <http://www.bne.uni-osnabrueck.de/Becker/Publikationen1>

Online-Literaturdatenbank
Bildung für nachhaltige Entwicklung (BNELIT)
Literature database: Education for sustainable development
<http://www.bne-literatur.de>

Profil und Funktionen der Literaturdatenbank	Profile and functions of the literature database
<p>Inhaltliche Schwerpunkte der ca. 33.700 Titel (08/2015) umfassenden Datenbank sind</p> <ul style="list-style-type: none"> • Bildung für nachhaltige Entwicklung • Umweltbildung • Globales Lernen • Nachhaltige Entwicklung (Basisliteratur) • Weitere interdisziplinäre Grundlagen <p>Die Datenbank umfasst grundsätzlich alle formalen, nonformalen und informellen Bildungsbereiche.</p>	<p>Focal thematic areas of the data-base which at present includes 33.700 titles approx. (08/2015):</p> <ul style="list-style-type: none"> • Education for Sustainable Development • Environmental Education • Global Education • Sustainable Development (Basic literature) • Other interdisciplinary basic literature <p>The data base includes all formal, normal and informal areas of education.</p>

Bildung für nachhaltige Entwicklung (BNE) ist von zentraler Bedeutung für die Zukunft unserer Welt, sie muss Leitbild von Bildung in allen Bereichen werden und ist unverzichtbar für die Gestaltung von partizipatorischen, zukunftsfähigen Mensch-Natur-Verhältnissen. BNE stellt eine Weiterentwicklung von Umweltbildung und Globalem Lernen dar, basiert auf zahlreichen inter-disziplinären Grundlagen und hat vielfältige Verbindungen zu weiteren Bildungsansätzen, die sich mit verwandten gesellschaftlichen Problemfeldern beschäftigen.

Seit langem gibt es deshalb eine zunehmende und immer schneller wachsende Zahl von Publikationen zu diesem sich immer mehr in verschiedene Bereiche, Fächer und Zeitschriften ausdehnenden Themenbereich, die selbst Experten kaum noch übersehen.

Die Literaturdatenbank wurde seit 1980 an der Universität Osnabrück von Dr. Gerhard Becker mit dem Ziel aufgebaut einer möglichst umfassenden Zusammenstellung von Publikationen wissenschaftlicher und praktischer Art sowie (bildungs)politischen Dokumenten. Mit der seit 2008 existierenden Online-Version steht die Datenbank jedem Internetnutzer zur Verfügung.

Um den Informationsgehalt der Datenbank für Recherchen zu optimieren wurden von Anfang an nicht nur die bibliographischen Standarddaten erfasst, sondern auch zusätzliche Infos (Abstracts, Inhaltsverzeichnis, digitale Dokumente, Weblinks u. a.).

Die Nutzbarkeit für Praktiker und Nichtexperten soll mittelfristig durch zusätzliche Rechercheangebote und erweiterte sowie verbesserte Funktionalität und Gestaltung erhöht werden.

Education for sustainable development (ESD) is of central significance for the future of our world; it has to be turned into an overall concept for all areas and is indispensable for creating participatory and sustainable relations between man and nature. ESD is an advanced version of environmental education and global learning, based on several interdisciplinary basic principles with manifold relations to other educational approaches that deal with social problem areas.

Consequently, a constantly growing number of publications on this thematic field has long been appearing on the market which refer to most different areas, subjects, also included in journals and magazines, difficult to be kept track of even by experts

Since 1980, the literature data base has been established by Dr. Gerhard Becker at the University of Osnabrück with the aim to offer a preferably extensive compilation of publications of scientific and practical character as well as (education) political documents. The on-line version of the data bank that is in operation since 2008 offers its services for all internet users.

Right from the beginning, not only bibliographical standard data was registered but also additional information (abstracts, directories, digital documents, web links etc.) in order to guarantee optimum content of information.

In a medium-term perspective, the usability for practitioners and non-experts shall be improved by additional offers of research and improved functionality and design.

<p>Adressaten</p> <p>Die Datenbank richtet sich grundsätzlich an alle Akteure, die zu den im BNE-Profil erwähnten inhaltlichen Schwerpunkten in den verschiedenen Bildungs- und Wissenschafts- sowie Praxisbereichen arbeiten oder sich dafür interessieren. Sie bietet einmalige Recherche-möglichkeiten in einer sehr vielfältigen und unübersichtlichen Landschaft von Bildung für nachhaltige Entwicklung und seiner zahlreichen Publikationen.</p>	<p>Addressees</p> <p>The data bank is basically addressed to all actors that dedicate their work and interest to the before mentioned focal areas in the different fields of education, science and practice. It offers unique possibilities of research in a very diverse and confusing landscape of education for sustainable development and its respective numerous publications.</p>
<p>Unterstützung, Kooperationen und Internationalisierung</p> <p>Alle Nutzer werden gebeten, eigene oder ihnen bekannte Publikationen bei uns mit allen bibliographischen Daten mitzuteilen und/oder die Datenbank dauerhaft bekannt zu machen (z.B. durch Links auf Webseiten), um auf diese Weise den Kreis der Adressaten zu erhöhen. Im Interesse der Aktualität, Qualität und schnelleren Erweiterung der Datenbank wollen wir unterschiedliche dauerhafte Formen der Kooperation mit Autoren, Organisationen und Institutionen, Verlagen u. a. aufbauen, die im Bereich des BNE-Profiles arbeiten. Interessenten dafür mögen sich bei uns melden.</p> <p>In der Datenbank ist zurzeit über 90 % deutschsprachige Literatur enthalten. Mittel- und längerfristig sollen stärker Publikationen von englischsprachigen Autoren, ggf. auch in anderen europäischen Sprachen geschriebene Werke erfasst werden. Dafür suchen wir Kooperationspartner in Europa und Unterstützung durch Förderprojekte. Falls Sie daran Interesse haben, melden Sie sich bitte bei uns!</p>	<p>Support, Cooperations and Internationalisation</p> <p>All users are asked to kindly inform us about their own publications or other publications of their knowledge with all bibliographical data and/or to publicize the data bank at a permanent base (e.g. by links on web sites) in order to increase the numbers of addressees. To ensure a maximum of timeliness, quality and extension of the data-bank we would like to build up permanent forms of cooperation with authors, organisations, institutions and publishers that work within the area of the ESD profile. All interested persons are welcome to contact us.</p> <p>At present, more than 90 % the data bank consists of literature in German language. At medium – and long-term range, publications of authors in English or other European languages are to be included. For this up-dating, we are in need of cooperation partners in Europe and support by fund projects. If you are interested in any form of cooperation, please feel free to contact us.</p>

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<http://www.bne.uni-osnabrueck.de/becker>

Biographical Note

Since 1973, Dr. Gerhard Becker has been working at the University of Osnabrück as a lecturer and researcher in the field of university didactic/educational studies. After his post doctorate in 1978 he dedicated his work in an increasing manner to environmental education, which led to the establishment of a separate subject area 'Environmental Education/ESD'.

As a result and in relation to his academic activities at the university, more than 100 publications and many continuous practical projects originated outside the university out of which in 1990 approx. Since about 1993, ESD was coined as the new central idea and subject in university teaching, research and practical projects as well as cooperative efforts of networking, mostly in Osnabrück. Since his retirement, his academic work has been continued in a reinforced manner under the name ,Umweltbildung für nachhaltige Entwicklung (UBINOS) '(Environmental Education for SD) and in cooperation with and at the University in form of practical projects especially in the context of the 'Landscape of Education for Sustainable Development (LESD) of Osnabrück.

Selection of present functions: Chairman of the association, speaker of the WG EE and of the WG ESD of the City Osnabrück for the construction of an LESD in Osnabrück. Member of the national working group 'Communities and ESD', member of the Commission 'ESD' of the German Association for Education Research - DGFE, Head of the Project for the Online Data Base www.bne-literatur.de.