
Educational Landscapes for Sustainable Development in Cities. Actors, Structures and Processes in Osnabrück

Gerhard Becker

Abstract

“Educational Landscape of Sustainable Development (ELSD)” is a concept still quite new in Germany and recently being implied in Osnabrueck and in those other German cities that were awarded with the label “City of the UN-Decade Education for Sustainable Development”. The complex subject will be dealt with under selected aspects at International and local level and illustrated by means of the example of Osnabrueck. The general role of towns or cities and regions within the process of Sustainable Development (SD) and Education for Sustainable Development (ESD) is the subject of Sect. 1. Section 2 offers a historic review on previous international concepts of education for a ‘learning society’ which led to the development of more recent concepts, similar to ELSD such as ‘Learning Cities’ and ‘Sustainable Learning Cities and Regions’ (SLCR) in some cities in Germany. Due to a lack of a general standard definition of SD, the author presents his more differentiated, six-dimensional conception, which includes education as one of these dimensions that corresponds in an ideal manner to the objectives of SLCR or ELSD (Sect. 3). On one hand, ELSD is being derived from the debates and practical approaches of ESD in Germany (Sect. 4) previously separated, and from educational landscapes on the other (Sect. 5). The current situation of ELSD under construction in Osnabrück is only comprehensible if it is considered from the background of its previous history of more than 30 years in which the Local Agenda 21 and respective organisations played a major role. Of special importance are also the numerous awards in the context of the Decade (DESD), which gave strong impetus for the further development of LESD in Osnabrück (Sects. 6–9).

G. Becker (✉)

UBINOS c/o University of Osnabrück, Postfach 4469, 49069 Osnabrück, Germany
e-mail: gbecker@uni-osnabrueck.de

Keywords

Education for sustainable development · Urban sustainability · Educational landscape · Local agenda 21 · Sustainable learning cities · Sustainable city · Sustainability

1 The Role of Cities and Communities for ESD—International

At the United Nations Conference on Environment and Development (UNCED) in 1992 in Rio de Janeiro ('Earth Summit'), the 178 participating states concluded, amongst others, the '*Rio Declaration on Environment and Development*' (27 principles) and the *Agenda 21*, which represents an extensive programme of action for sustainable development in the 21st century worldwide. In its 40 chapters on 360 pages, recommendations and possible forms of solutions for the most urgent questions are suggested in detailed manner. In Section III in Chapter 23–32 special focus is put on "Strengthening the role of major groups", i.e. participation, as a precondition for success and a democratic claim for SD. Chapter 28 stresses in particular the importance of strengthening the role of the communities "*Because so many of the problems and solutions being addressed by Agenda 21 have their roots in local activities, the participation and cooperation of local authorities will be a determining factor in fulfilling its objectives. Local authorities construct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations, and assist in implementing national and subnational environmental policies. As the level of governance closest to the people, they play a vital role in educating, mobilizing and responding to the public to promote sustainable development*".

Chapter 36 (Promoting Education, Public Awareness and Training), that follows chapter 35 (Science for Sustainable Development) in section IV of the *Agenda 21*, is the centre piece and historical point of departure for ESD worldwide. It was Chapter 28 which started off many processes of a 'Local Agenda 21' (LA 21) that are being organized for more than 20 years now in cooperation with the citizens and organisations of civil society and private industry in many thousands of cities and towns and numerous countries (amongst others also in Osnabrück). This process was partly organised and supported by the 'International City Network (ICLEI). This local approach for SD and ESD under the popular slogan "*Think globally—act locally!*" was reflected by several conferences, programmes, declarations and resolutions at National and International level, e.g. the European Cities and Towns Towards Sustainability (Aalborg-Charta 1994), in which also German towns took part (<http://www.sustainablecities.eu>). During the past twenty years, several new networks of towns and cities developed at International level, most of them dedicated to a special thematic focus within SD: "Climate Alliance of European Cities with Indigenous Rainforest Peoples" (since 1990), "Fair Trade Towns" (with 2200

cities from 25 countries), Energy Cities, Healthy Cities, Green Cities etc. A characteristic feature of many of these networks—at least in Western countries—is a strong participation of citizens' groups and initiatives. In these cities and regions ESD, was not so much important as a defined term and systematic approach, but rather dealt with processes of informal learning and public awareness in particular relation to ESD.

With the recommendation of the UN Conference on Sustainable Development (UNCSD), also known as Rio+20 in 2012, it was stipulated in the same year by the UN to have the Decade of Education for Sustainable Development (DESD) last from 2005 to 2014 and to be organized by UNESCO (<http://www.desd.org/>). With this major global impetus, the conceptual development of ESD and above all adequate guidelines for practical action were significantly promoted in many countries. It became clearly evident that in particular for ESD the local and regional level are of utmost importance: It is here where many actors (organisations, institutions, citizens who feel committed) can do efficient work in close cooperation with the citizens and in particular in view of the benefit of children/adolescents. This idea was then implemented and further developed in many cities, towns and countries.

At many political events and in many decisions, the utmost importance of ESD for all fields of education and for all subjects of sustainable development was unanimously stressed (including vocational training, non-formal education, informal learning and public awareness). Nevertheless and despite the fact that many highly successful projects were carried out, a systematic implementation into practice is still lacking today in many fields of education and areas of community work. This is why the implementation of the strategic imperative “From project to structure” (DUK 2014a, b) will be the next decisive step for the future of ESD and SD.

In the meantime, the ‘Global Action Programme’ ESD (GAP) worldwide has been concluded for a period of five or perhaps ten years from 2015 onwards. In the “*Roadmap for Implementing the Global Action Programme on ESD*” the local level of action was emphasised as one of the five “*priority action areas*”: “*Accelerating sustainable solutions at local level: At community level, scale up ESD programmes and multi-stakeholder ESD networks*”. In an increasing manner, ESD and the local/regional level gains in importance also in other International areas of the UN and its organisations (see e.g. <https://www.worldwewant2015.org/>):

- During the above mentioned UN-Conference Rio+20 of 2012, it was decided to enhance the Millennium Development Goals (MDG) from the year 2000 to Sustainable Development Goals (SDG) and in 2012 the UN General Assembly resolved on the 50 page document “The Future We Want” which continues in line of the Agenda 21 to: “*renew our commitment to sustainable development and to ensuring the promotion of an economically, socially and environmentally sustainable future for our planet and for present and future generations*”. In all subject areas of SD, ESD is (again) attributed major and reinforced significance (see in particular, articles 229–235).

- A concept paper on the SDGs has been presented which is to be concluded in September 2015 by the General Assembly of the UN and so far evoked many intensive discussions. It contains 17 articles, article 4 on education reads as follows; “*Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*”. In sub article 4.7., it carries on; “*by 2030 ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through ESD and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture’s contribution to sustainable development.*”
- Whilst the Programme *Education for all* (EFA) that emerged from the last *World Education Forum* in Dakar in the year 2000 strongly focussed on educational access in less developed countries, the new initiative *Education 2030* is addressed to the entire humanity with its declared objective *Towards inclusive and equitable quality education and lifelong learning for all*. At the end of the World Educational Forum of the UNESCO in May 2015 (Incheon, South-Korea), a declaration on global education policies was adopted: Its new vision directly refers to the (educational) goals of the future SDGs and of the GAP on ESD: “*we strongly support the implementation of the Global Action Programme on ESD launched at the UNESCO World Conference on ESD in Aichi-Nagoya in 2014. We also stress the importance of human rights education and training in order to achieve the post-2015 sustainable development agenda*” (UNESCO 2015).

In summary: The fact that several strings of UN policies with different subject-orientations are combined to a joint perspective of SD may be regarded as a positive form of development. These include climate policy as well as the relevant UN Conference *Framework Convention on Climate Change* in December 2015 in Paris.

2 The Treasure Within Learning—Learning Cities—Sustainable Learning Cities and Regions

The fact that cities and communities play a vital role for the development of education and learning in general was recognized and discussed already long before the Agenda 21 and found its expression in respective concepts. For example in the Report “*Learning to Be: The World of Education Today and Tomorrow*”—also promoted by the ideas of famous educators like P. Freire (Watson 2015, p. 6), J. Dewey, ...: “*Local and national communities are in themselves eminently educative institutions*” (Faure et al. 1972, p. 162). 24 years later a second Report of UNESCO “*Learning: The Treasure within*” (Delors et al. 1996) was published with a different socio-political contexts (crisis of education/social movement—End of the socialist model/End of the Cold War/Neoliberalism) but these both reports have many similarities (Elfert 2015, S. 89ff). The ideal vision of education had a political

dimension in terms of the emancipatory claim for justice and equality. This vision is also a vision of a ‘learning society’, of lifelong learning and ‘learning throughout life’ (UNESCO 2002). In order to build a learning society and make lifelong learning a reality, it is important to embrace and connect all learning stages, types and places. This vision resembles more recent ideas of ‘Educational Landscapes’ for local communities and regions in Germany (Sect. 5). Whilst, on the one hand, the National politicians of most countries tried to push through the technocratic and utilitarian concepts of the OECD and the World Bank and implement these into educational practices; i.e. skills and competencies for labour market needs in the context of a competitive society, also positive movements continued to develop simultaneously (see Sect. 1), although SD and ESD did not play a major role in most discussions and investigations of the past 20 years.

Perhaps the initiative of UNESCO, ‘Rethinking Education’, will help to introduce considerable changes to this attitude by formulating the humanistic and universal vision of UNESCO on the future of education in the context of the current post-2015 debates (UNESCO ERF 2013; UNESCO 2014; Tawil and Cougoureux 2013, p. 8).

‘Learning cities’ is one significant approach of learning societies that was developed in recent years (also ‘learning communities’, and ‘learning regions’) (Roche 2015; Fitzgerald and Zientek 2015; UNESCO 2013b). This idea has been discussed and conceptualised in developed countries since the 1980s (OECD 2002), but with an economical background, because learning cities and regions are very important for knowledge and innovation based industries and also for developing countries (e.g. Osborne et al. 2013). Processes of ‘Learning cities’ are important tools for sustaining social, economic, ecological, cultural and democratic issues (Sect. 3) and vice versa. But in most Learning Cities local sustainable development has not made subject of discussion, yet. In the general introduction of a case study on the city Kaunda in Lithuania, Juceviciene wrote “*The sustainable development of a Learning City is based on a twofold approach: to help inhabitants, organisations and communities to solve relevant problems by empowering their learning processes and promoting respect for the principles of sustainability. Thus, the conditions for expanding the concept of the Learning City into the Learning Sustainable City are created*” (Juceviciene 2010, S. 434/35). Kearns (2012) holds a similar, highly ambitious view by promoting his approach of a healthy life style as a further, important goal.

Also, the importance of sustainability was stressed in an increasing manner at both, the International Conference on Learning Cities in Beijing (2013) and the International Conference on Learning Cities in Mexico (2015). “Promoting Sustainable Development” is pronounced as the third Commitment of the Beijing Declaration (UNESCO 2013a). In the ‘Key features’ of this conference a Learning City is defined as a city “which effectively mobilises its resources in every sector [...] and will create and reinforce individual empowerment and social cohesion, economic and cultural prosperity, and sustainable development” (UNESCO 2013a).

This second Conference in Mexico “will mark a milestone towards ‘Building Sustainable Learning Cities’ and make a significant contribution to the achievement of UNESCO’s 2030 education agenda” (see announcement at <http://www.learningcities2015.org/>).

All conclusions and programmes mentioned in Sects. 1 and 2 can only offer a general framework for practical implementation. Already many years before, much effort was made of developing precise methods for the successful promotion of sustainable development in cities and regions and for to estimating the respective effects in view of uncertainty, indeterminacy and multiplicity (e.g. Ravetz 2000). This task will become even more complicated if the wide field of Education and Learning (formal and non-formal) is included, which already is highly complicated on its own. In nearly all publications on SD, which in the meantime have grown to a vast number, the aspect of education is only marginally considered, if at all or only being regarded as a secondary tool for sustainability.

On the one hand, it is necessary to develop and try out concepts of a holistic regional approach for local/regional sustainable development and its implementation which are essentially characterized by inclusive forms of participation and education in all areas (see Sect. 3). This necessarily implies a certain democratic openness of processes. On the other hand: Within the context of increasing liberalisation, deregulation and privatization, cities that are often characterized as powerful actors of social development are more and more exposed to external constraints and parameters (e.g. Heinz 2015) quite incompatible with SD.

3 Sustainable Development (SD) as a Six-Dimensional Concept

The ultimate aim of SD is to improve the life conditions and needs of present and future generations (intergenerational and international justice). It is a widespread idea—also included in the *Agenda 21*—that this requires the integration of ecological, economical/environmental and social aspects at all local and global levels. In Germany this postulate is often called the ‘*Triangle of sustainability*’ or ‘*three pillars of sustainability*’, represented in a symbolic manner in several graphic illustrations and being frequently employed in all recent debates and conventions as an argumentative instrument. Mostly on basis of this three-dimensional postulate, further and more differentiated models were introduced into the academic and political debates of the last 20 years, all presented in numerous scientific publications. In some of them, also other dimensions of SD are included, such as culture, health etc. My own concept that forms the basis of the work of many organisations and projects in Osnabrück, distinguishes amongst six dimensions which all work in interaction. For more than 15 years, this model has been translated graphically as a six-pointed star of sustainable development and been disseminated in several publications (e.g. Becker 2001 ff) (Fig. 1).

Fig. 1 G. Becker six-pointed star of sustainable development



Economy means economic development, Ecology means environmental protection and Justice for me implies social justice (in graphics often too simply abbreviated as ‘society’). In addition to these usual three dimensions, I also include ‘Participation’ (of groups and citizens), ‘Culture’ and ‘Education’ as other independent dimensions.

Participation and education are indispensable for the Agenda 21 and the subsequent conception of SD, but unfortunately they are reduced and conceived only as instruments for the three dimensions. Their independent relevance for a successful SD is being ignored. In particular, they are highly significant when we look at the local aspects of a city or community, and they can be implemented more easily at local level (see Sect. 1). Furthermore, education in a broad interpretation and in all areas, also including the informal sector and publicity for measures of sustainable urban development (e.g. of public or communal institutions) is an indispensable precondition for successful and democratic participation. ESD can contribute substantially to develop sustainable cities and regions and teaches all citizens daily competences for organizing their lives. Nearly all over Germany one generally agrees that the major and general target of ESD consists of the so-called ‘*Gestaltungskompetenz*’ (shaping competence) which refers to anticipating and autonomous participation in shaping sustainable development. However, there is fewer consensus when it comes to the question whether ESD can or should also include personality development in the sense of a humanistic concept of education (Jahrbuch BNE 2015, p. 148ff).

Occasionally, the cultural dimension is conceived as a fourth dimension. At least implicitly, this holds true for the UNESCO, which stresses the relation of Culture and Sustainable Development Strategies at the latest since the “Convention on the Protection and Promotion of the Diversity of Cultural Expressions” of UNESCO (2005) and the following programmes. In the academic field, this view has been shared for some time by some scientists of the Leuphana University in Lüneburg (e.g. Stoltenberg 2009). The cultural dimension, however, does not refer to conservation and consideration of cultural diversity alone. What SD requires is to radically change the modern non-sustainable culture of daily life (e.g. consumer-oriented style of life) in many economically developed countries; as well as to develop sustainable alternatives in numerous, less developed countries. This is why culture with its diverse concepts must be considered as an independent dimension for SD and ESD.

Consequently, these six dimensions should be employed as an ideal model and overall concept for an integrative analysis of subjects and problems of non-sustainability and—what is even more important—be considered in processes of integrative planning of SD. Finally, this six-dimensional conception opens up the view for a broader spectrum of potential actors (see Sects. 5–7).

For the organisation of ESD efforts, this differentiated model implies an orientation along the lines of the other five dimensions of SD. As a rule, such an integration of dimensions is not possible without any contradictions; in the end one will not be able to avoid political or personal processes of appreciation of values. This requires democratic discussions and a possibly broad participation of all persons concerned and involved, which is more easily to be achieved at local level. What is also necessary, however, is to combine this with public relation and environmental awareness training. ESD empowers citizens to shape their own lives as well as the future of their communities. This again is the “shaping competence” for our social and individual future. ESD is a ‘real’ and inalienable utopia (Becker 2008).

4 Local/Regional ESD in Germany

Under International comparison, the Decade of ESD (DESD) in Germany was quite successful: Whilst, on one hand, many initiatives took place within and outside of national, communal or other institutions, there was a lot of political support offered at Federal and regional level in form of numerous resolutions and programmes on the other (e.g. National Plan of ESD). With sponsorship by the Federal Ministry for Education and Research, the German Commission for *UNESCO* (DUK) took over the responsibility of being in charge for the German activities that were under the patronage of the German Federal President. The DUK convened a National Committee for organising the implementation of the Decade in Germany. A very efficient instrument for the growing success in Germany was the fact that awards were received on basis of the successful and exemplary work in the fields of ESD.

From 2005 to the end of 2014, about 2000 projects and/or organisations as well as many measures received an award, and since 2008 also 21 cities such as Hamburg, Frankfurt, Freiburg, München, Dresden, Bonn, Heidelberg, Gelsenkirchen, Erfurt and in 2013 also Osnabrück and some smaller communities were awarded ('Cities and local authorities of the DESD'). Although these awards were not combined with a financial prize, they implied a strong motivational gain for the actors as the awards increased the degree of popularity in public and often led to financial support, e.g. when applying for sponsorship with foundations, municipalities or other sponsoring bodies. This reinforced the work within ESD and the projects of the actors on site. It was largely due to this 'culture of awards' that the DESD was rather successful in Germany. This effective work was supported by the state. The same holds true for organizing and coordinating of several national working teams on significant fields of education and selected thematic areas, as well as the construction and maintenance of the two portals www.bne-portal.de and www.globaleslernen.de which include all important information, publications and awards.

All 21 cities and smaller communities that received an award work together in a National *Working Group 'Communities and ESD'*. I personally learnt that the cooperation in this group and the exchange of ideas and experience implied proved to be very valuable for the work on site. In the meantime, an analytical study on networks has been elaborated which is highly informative and analyses the educational landscape of five selected cities and communities of different type and size (Fischbach et al. 2015). Thanks to the successful strategies of this working group and the community approach implied, the local level of ESD was included into the International debates of the UNESCO and finally also into the final conference of the Decade in November 2014 in Japan. This was also reflected in the Roadmap for the GAP from 2015 onwards (see Sect. 1).

This German working group of communities continues their projects and processes under the frame of the GAP for ESD. At present (June 2015) it still remains unclear which substantial support will be granted from the respective local and national authorities in Germany.

5 About the Term "Educational Landscape" and Its Significance for ESD

With the 'Declaration of Aachen' (DST 2007) and the 'Declaration of Munich' (DST 2013) of the 'German Conference of Cities' the fairly new term 'Bildungslandschaften' ('Educational Landscape') already gained strong importance at the level of local policies in Germany. This was also reinforced by the federal-wide promotional project '*Lernen vor Ort*' (Learning on Site) which at regional level focussed mainly on "coherent educational management", "equal opportunities" and "social advancement by means of education". In pedagogical literature, the wide-spread term "educational landscape" (Bleckmann and Durdel 2009;

Bleckmann et al. 2012; DKJS 2010, 2014; Bollweg et al. 2011; Coelen et al. 2015; DVÖPF 2009; Heinrich-Böll-Stiftung 2011) is being used in most different manners in Germany, in its conceptual definition as well as in practice and with regards to its intended function, and sometimes even from a critical viewpoint (Mattern and Lindner 2015). The development tends to divert the attention from its original focus on local school systems and all-day schools to extend to more non-formal fields of education and publicity work on subjects with relevance for community policies. In addition, subjects such as informal education, learning in everyday life and in the public field are also being taken into consideration: “*local educational environments (landscapes), long-term networks on the subject of education with the aim of joint planned action and supported by community policies that start off from the perspective of the learning subject, include formal sites of education and informal worlds of learning and are related to a defined local space*” (Bleckmann and Durdel 2009, p. 12).

Controversial debates are held for instance between the following positions:

- The (communal) aspiration for an increase in educational governance—often with an emphasis on school and child and youth help, and often combined with a stronger orientation towards measurable results.
- The critical call for improved opportunities of participation (participation of adolescents and other groups of the population) and the implied processes of learning.

(Abstract) common features are the exclusive focus on the ‘learning individual’ and the exclusion of content-related subjects. A certain exception is the area of cultural education which is mostly understood as a holistic methodical approach and only partly in view of contents related to cultural subjects.

The great success of the term “educational landscape” in Germany can certainly be put down to the broad range of its conceptual contents as well as to the fact that both partial terms ‘education’ and ‘landscape’ are associated in the German language with a very positive or even romantic meaning. This makes it even more important to clarify the actual meaning of educational landscape in its respective communal/regional/local context and its targets on site.

In English-speaking countries, however, the term ‘educational landscape’ has a more special meaning and is related to individual areas of education, e.g. higher education, universities, schools (e.g. Coates 2010). In relation to its content, the German term ‘Bildungslandschaft’ rather corresponds to the concepts of learning cities/local learning regions etc.

In Germany, ESD has received only little attention within the general discourse on educational landscapes. Although, also in Germany, the term ‘Sustainable Landscapes of Education’ is being used quite often, this is done in another sense, merely referring to durable in time, i.e. long-term stability and not with reference to contents und goals in the sense of a SD. Also, there are only few (scientific) publications on the very new term “Educational Landscapes for SD” (ELSD) (e.g.

Stoltenberg 2013). Contrary to the general discourse and to most of the practical approaches to educational landscapes, the learning individual is not (just) explicitly being dealt with in the context of ESD although (But) the individual is right in the focus of all considerations and directly related to a series of important subjects of sustainable (regional) development relevant for the future, e.g. climate, mobility, nutrition... The ultimate objective always points at the acquisition of (The final target is always acquiring) possibilities of participation ('shaping competence'), especially at the concrete local level. Under methodological aspects, cultural education with its variety of creative possibilities of learning is also here highly significant for many groups of addressees (e.g. Kelb 2013).

At least in an implicit manner, ELSD has become subject of reflections and debates in those 21 cities and communities which were awarded in Germany within the label of the UN Decade ESD and is an official term in Osnabrück and some of the other communities. The Declaration of all lord mayors at the occasion of the final ESD conference (DUK 2014c) states amongst others; "*ESD is thus a major basis and orientation for the construction of our local and regional educational landscapes*". Although due to the different local conditions and backgrounds there are differences in the way these aims are implemented, the awarded communities as well as those nominated for the GAP unanimously agree on the significance of this aim for the coming years. This was also stipulated in a strategic publication of the DUK 2013 "*As regards the proposed strategic development of 'sustainable regional educational landscapes', it is necessary to reinforce the cooperation of all actors who can contribute to successful learning processes in a sustainable society. A precondition for this is the establishment and management of suitable high-qualitative and effective networks*" (DUK 2013, S.11, a more detailed description pp. 28–30). All this leads to the assumption that the term 'Educational Landscape of SD' (ELSD) will soon be firmly established in theory and practice.

The underlying concept of the German term corresponds also to the suggested major tasks formulated in the GAP at International level that intends to join the different actors for cooperation and integrate the different educational areas and subjects into a comprehensive concept. In my view, ESD should be considered as a necessary perspective and long-term orientation for all local educational landscapes which would change the future relation of ESD and education (Becker 2013, 2014, 2016).

6 Osnabrück—Many Steps on the Way Towards a City of ESD

It is important to know that sustainability issues, especially Environmental Education, Global Education and later the follow-up concept ESD have a long tradition since the beginning/middle of the 1980es in this city. An increasing number of actors (associations, organisations, projects and others) in almost all fields of formal, non-formal and informal education have been creating active processes.

A decisive part is also taken over by the commitment of many organisations of civil society and by manifold voluntary community activities of Osnabrück citizens.

For more than twenty years, a vivid and successful Local Agenda 21 (LA 21) is active in Osnabrück with working groups on several subject areas, and a “Forum Agenda” that meets at regular basis. A first solid product of the network and cooperation (stipulated by contract) was established in 1997 in form of a municipal “Centre of Environment Education” (in brief: CEE) in the “Museum of Nature and Environment”. A similar construction developed within the ‘Third-World-Centre’ in Osnabrück. In 2002, the open Working Group Environmental Education (WGEE) of the Local Agenda 21 Osnabrück developed by the CEE in 2002 proclaimed right from the beginning ESD as its guiding principle. This Working group focussed its tasks on network building at local level, public relations on annual themes and related competitions for schools and other local institutions of education, and worked in close cooperation with the Osnabrück “Association for Ecology and Environmental Education” (in brief: AEEE) on many common projects (e.g. Becker 1997a, b, 2001). One outstanding example for the joint work of these two organisations at International level is their close cooperation work with the Baikal Information Centre GRAN in Ulan-Ude, the University at Ulan-Ude and several schools in Buryatia in Eastern Siberia in Russia in form of intercultural ESD, above all in form of youth exchange programmes (Becker and Dagbaeva 2009).

Since 2005, the WGEE has been awarded five times by the German UNESCO with the label of *Official Projects of the DESD*, and the AEEE three times since 2009 for their excellent work for two years each. In addition to these two organisations and their numerous projects in the field of ESD, more and more activities gradually developed in Osnabrück that were directly concerned with ESD and similar subjects and objectives or actually assumed a similar orientation. This also led to new forms of cooperation or networks at temporary basis. From 2005 to 2014 more than 50 projects in the City of Osnabrück and in the near surroundings received an award for their outstanding work in the field of ESD within the frame of the DESD. In the end, the situation became more and more confusing so that it might have been characterized as a sort of ‘untouched, natural’ educational landscape. Nevertheless, little use was made out of this great potential implied for ESD due to the fact that the actors hardly knew each other, or that everybody was primarily self-absorbed. This problem was even reinforced by the decrease in staff and financial resources.

From this background and encouraged by the ESD Award label of other German cities, the WGEE and AEEE took the initiative in 2012 and tried in a joint action to convince the local politicians and the city administration of Osnabrück to apply for the UNESCO-Award hoping primarily that a successful application would bring new impetus to the latent ESD in Osnabrück. This became more and more urgent in view of the decreasing commitment of the City of Osnabrück in the areas of Local Agenda 21 and environmental education/ESD in response to the urging austerity measures.

For this reason, debates were held together with all seven parliamentary groups of the political parties in the City Council which finally led to a successful outcome in April 2013: The Council of the City of Osnabrück unanimously decided to declare ESD to be a central element of the guiding principle of all educational policies of the city. This was one of the preconditions for the awarded label 'City of DESD' by the German Commission of the UNESCO in August 2013.

The time-consuming processes of application for the award was taken over by the WGEE and AEEE (mostly on voluntary basis) as no staff member of the municipal administration neither had the sufficient time nor felt competent enough to cope with challenging task.

Also other cities that were awarded with the ESD label had entrusted particularly committed actors with the application procedure for ESD, mostly NGO staff. Successful work of ESD at local level requires a sufficient number of actors and a good form of cooperation with the respective municipalities. Once having been awarded, this success will generally produce strong impetus to expand this cooperation at local or regional level and consequently implement, extend and improve ESD more strongly in all areas as an efficient measure of SD in these cities.

7 Survey of ESD Activities in Osnabrück

Takin stock of all activities and contexts of ESD was an indispensable requisite for submitting the application in spring 2013. As so far nobody in Osnabrück had been able to set up a clear overview, this proved to be more complex and time-consuming as had previously been expected, even for the WGEE and the AEEE who had volunteered to take over this task on behalf of the City of Osnabrück. Already before the label had been awarded, the inventory was being published step by step on the new designated website <http://www.bne-osnabrueck.de> in order to inform all actors about all affiliated members before starting redeveloping the network of cooperation. In August 2013, the UNESCO officially pronounced the award and combined its decision with great praise for the diversity of actors and projects. Due to the complex character of stock taking, we shall refrain here from going into too many details. For a better overview, seven groups of actors and projects were defined which already cooperated in most different areas in smaller networks. Although the administration of the city is only explicitly mentioned in the final two groups, it has to be stressed that with regards to content the different municipal departments were often involved in projects of other groups and supported them. Admittedly, the cooperation amongst the city administration and actors within civil society still needs further improvement and a reinforced support by the City authorities. This is one of the long-term perspectives of the Osnabrück LESD which, at this stage, did not bear this official name yet.

Group 1: The WGEE comprises a cooperation of representatives of important institutions, such as AEEE, CEE, Museum Nature and Environment, Green School in the Botanical Garden of Osnabrück University, Technical-ecological Learning

Site ‘Nackte Mühle’, Museum Industrial Culture, Zoo Osnabrück/Zoo School, Centre of Environmental Education ‘Noller Schlucht’,...and committed individual persons.

Group 2: 43 projects, organizations and networks awarded with the label of *official projects of DESD* by the German UNESCO. In addition to the organizations WG EE and AEEE that had been awarded 5 resp. 3 times, and some projects of other members of the WGEE, the following projects of other organizations and private business enterprises from quite different areas were also awarded in the City of Osnabrück: 3-Berge-Projekt (3-Mountains Project with 8 supporting organizations), WABE-Centre (Nutrition, sustainable production of food, University of Applied Sciences Osnabrück), Osradio (Citizen’s radio), Terre des hommes Osnabrück (For children, their rights and equitable development) and *Help Age Osnabrück* (humanitarian charitable organization for the rights of older people), Center for Environmental Communication (ZUK), *Niedersächsische Auslandsge-sellschaft e.V.* (Foreign Society of Lower Saxony: intercultural projects for sustainability), CookUOS (Project for sustainable nutrition—University of Osnabrück), Studienseminar Osnabrück (Practical Teacher Training—Vocational Training), *Möwe gGmbH* (Reutilization of used materials), *Neue Osnabrücker Zeitung* (Local Newspaper with projects for schools); *Hellmann Worldwide Logistics* (Project ‘Students learn Sustainability—Vocational School network’). Furthermore, there were seven other organizations/institutions from the direct surroundings of Osnabrück that received the same award.

Group 3: The Local Agenda 21 Osnabrück with a forum, thematic working groups (environmental education, energy, building and living; urban development and traffic, home and living at old age; fair trade; peace garden), sustainability days at a yearly base since 1994 (with support of the city administration).

Group 4: Institutions of Education and Science with the general principle of ESD and ESD practice, e.g. University of Osnabrück; University of Applied Science Osnabrück; Adult Education Centre Osnabrück; Music- and Art School, many of the approx. 80 schools in Osnabrück providing general education, many nurseries...

Group 5: Parts of the following **three networks**, operating now for 10–15 years, are closely connected to the work of Agenda 21—each with numerous participating organisations: Development-political work—Action Centre 3rd World—Fair Trade; Round Table CO₂—Osnabrück Climate Alliance—Project City of Climate; Osnabrück Environmental Forum (all organisations for protection of nature).

Group 6: Osnabrück—City of Peace: On basis of the conclusion of peace in 1648 after the *Thirty Years’ War*, Osnabrück is proud to be named the City of Peace which is reflected by many activities for promoting a culture of peace, regular intercultural/International events as well as by regular exchange and relations with 11 different partner towns, represented each by their ambassadors: Angers (France), Çanakkale (Turkey), Derby (England), Evansville (USA), Haarlem (Netherlands), Hefei (China), Twer (RUS) und Vila Real (Portugal) ... It is not possible to achieve sustainable development without peace and intercultural understanding. This is

another reason that proves that the cultural dimension of SD is so important and indispensable (see Sect. 3)!

Group 7: City administration: At this level, there are many examples from different areas which either link civic actors in a cooperative manner or where vivid controversial debates are held in public. Example: Early participation of citizens in measures of urban development planning and of traffic planning (Mobility 2030 of the Municipal Utilities Campaign Cycling...), integrative intercultural projects, Fair Trade (City was awarded with the label *Fair Trade Town*), climate protection (at present the model project *Masterplan 100 % Klimaschutz*, financially supported), *Grünes Netz*—(Green Network of relevant ecological sites in the urban district), *Saving Energy at Schools* (management of properties and buildings by the City administration, carried out by the AEEE). The long-term project ‘*Revitalisation of urban flowing waters*’ is a good example of how the City deals with future-related subjects: Since 1998 approx. ecological, constructional, cultural and pedagogical measures have been organised in a systematic manner for revitalising the river ‘Hase’ of the City (Living ‘Hase’) in cooperation with organisations and institutions, again and again with support of external sponsors. The network “Schools for a living Hase” is being coordinated and further developed by the AEEE on behalf of the department *Environment and Climate* of the City of Osnabrück. It is envisaged to expand the network with participation of the university and about another 10 educational actors/organisations.

Although the actors of the groups 4–7 played a very important role for the development of ELSD at Osnabrück, it was not possible to take them into consideration in the following. Particularly worth-while mentioning is the development-political area around the ‘3rd World Centre’ which has been active as long as since the beginning of the 80s. The same holds true in a similar manner for the field of action “peace culture” which is of central importance for Osnabrück, the City of Peace. In view of the present world situation, the importance of Intercultural Education for Peace becomes more urgent than ever, unfortunately still rather detached from ESD not only in Osnabrück.

8 Building Educational Landscapes for Sustainable Development in Osnabrück

The German Label ‘City of DESD’ in 2013 gave strong impetus to ESD and to a broader conception of a more comprehensive ELSD in Osnabrück, and initiated many processes of stronger linking the individual educational actors in view of their common goal. The department “Urban planning and Integration” of the City administration which was responsible for LA 21 until the end of 2014 established an official Working Group ESD for Osnabrück (WG ESD) which included the initiators of the application of the City (WGEE and AEEE) who continued to take over a leading part as far as promotion and expert knowledge was concerned. In addition, the speaker of LA 21 also participated in this WG ESD and the communal

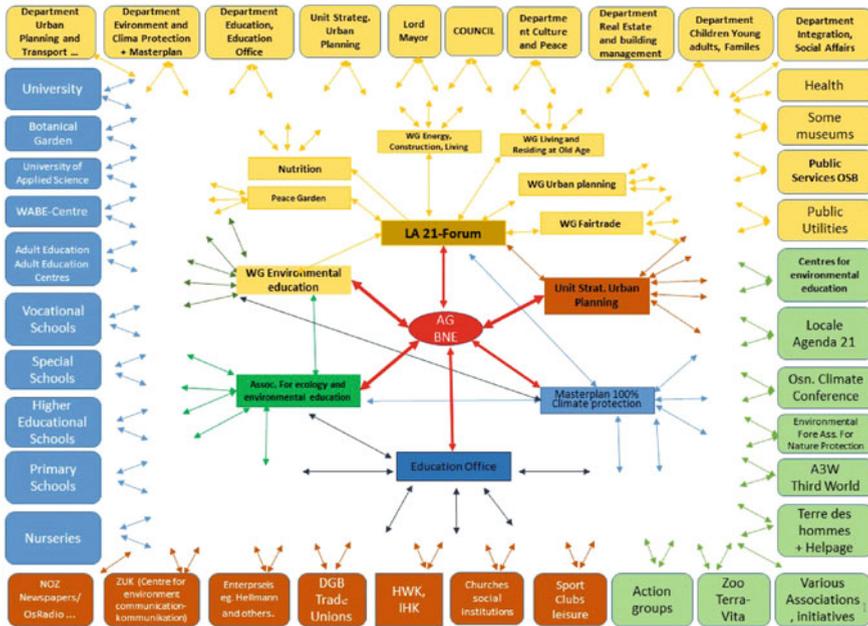


Fig. 2 G. Becker: Landscape of ESD Osnabrück: actors, structures and potential 2013–2015

‘Educational Office’. For some years, the educational institution had been engaged in developing in Osnabrück a region for consistent education (within the frame of the National project ‘Lernen vor Ort’ (‘Learning on Site’), which also included the concept of Educational Landscape. Soon the term ELSD was officially employed as a perspective of an ESD process in Osnabrück. An illustration of LESD is shown in the following graphic (the arrows in Fig. 2 near to the actors at the external margin are to be understood symbolically).

As at this stage, additional resources for this BNE processes were not granted by the City, the following major activity could not be organised before the event ‘*Day of Sustainability 2014*’ in November 2014 which was conceived as an event of the LA 21 with the aim of broadening the perspective. This half-day activity under the heading “Together for a sustainable Osnabrück—Landscape of Education for sustainable development” was mainly organised along the lines of the method *Worldcafé*. Intensive discussion took place at eight thematic-tables (Nutrition, Fair Trade, Health, Climate Protection/Energy, Culture, living and residing at old age, municipal development/transport and as a cross-sectional subject ESD) with alternating participants. The most important ideas were presented in the final plenary session and published immediately on the respective Website (www.bne-osnabrueck.de/NHT2014). A detailed documentation of all ideas and suggestions was published in spring 2015. The following proposals by WG EE and AEEE have been implemented, prepared or intensified:

- Establishment of a quarterly ‘*Dialogue-Forum ESD*’. The following first subjects for are:
 - Nutrition education for sustainable development (April 2015),
 - Teaching sustainability in daily school life—but how and with whom? (July 2015)
 - Vocational ESD and sustainable mobility (Sept 2015 at and with Hellmann logistics)
 - Immigration/Refugees and BNE (Dec. 2015, preliminary)
 - 2016: Climate change, Faire Trade, ..., (suggestions)
- The *ESD Newsletter* already published since end of 2013 by the WGEE was enhanced and intensified and sent to a broader circle of addressees
- Improvement of the website www.bne-osnabrueck.de
- Interviews with ESD-actors with publication on the website and radio broadcasts at regular intervals (www.bne-osnabrueck.de/Interviews)
- Further preparation of the organisation of the *7th Agenda competition* on the subject “Climate Education” with a programme and events in 2016 within the frame of the programme *Masterplan 100 % Climate Protection* of the City.

9 Future Perspectives and Problems

All other suggestions made at the “Day for Sustainability” will have to be examined in the LA 21 and to be implemented, at least partly. Other important areas had been represented only to a very small extent or not at all, such as e.g. the area of Development Policies/Global Education and Peace Culture/Intercultural Peace Education. In these aspects, there are only few ideas for a better networking in the field of ELSD of Osnabrück and its surroundings.

The entire process of ESD in direction of ELSD needs to be supported by new resources of the City of Osnabrück and to be reflected in binding structures together with the most important actors. The current form of operation by means of mostly voluntary activities will not suffice for a stable basis for the future. Whether such a safeguard at community level succeeds at medium range in Osnabrück, will depend largely on the implementation of the “Strategical Targets of the city 2016–2020”, focussed on urban planning that is fair and just under social and environmental aspects, sustainable mobility, environmental consciousness and protection of the natural resources and which includes “ESD as an essential part of the guiding principal of the city’s educational policies. The City of Osnabrück will ensure a diverse and inclusive offer of schools of higher education as well as vocational schools which corresponds to the needs of the parents and young adults.”

In a further step, a liable plan of practical implementation will have to be worked out in a participatory process together with the actors; and necessary resources of staff and finance will have to be provided. In view of the required budget cuts for

the municipal household this is—like in other cities and towns—a very difficult task.

10 General Conclusions

As shown by the argumentation in this article, on basis of world-wide conferences and programmes on the central themes of humanity, we will stand a good chance in 2015 of better conditions for ESD in general and for the implication at local level in particular. This tendency is largely supported by increased importance attributed to ESD due to a clearer awareness that all these human problems are interrelated closely. Even if this is reflected in all resolutions of the conferences, however, this will merely procure a general framework and hopefully create impetus to be implemented and substantiated at all national, regional and finally also local levels. What is also needed in cities and communities is a strong political will, combined with a clear strategy on basis of a joint vision of sustainable development and education as well as a progressive plan for implementation that involves actors and citizens on site and promotes a stronger commitment and better education in all areas. Whether ELSD or Learning Sustainable City/Region is concerned; in the end all actors and stakeholders, teachers, educators, politicians etc. will have to understand: ESD is “*not simply a supplementary area of learning and activity but an overarching cross-cutting task*” (DUK 2014a, p. 10). In particular, all local strategies for sustainability should attribute much more significance to education than before.

The example of Osnabrück proves that such an immense challenge requires a radical modification of opinions and attitudes of all participants involved. Even constructive and feasible networking within a city and a region appears to be a quite difficult task, a process during which local authorities should adopt a coordinating, controlling, motivating and supporting role.

Successful examples worldwide show different ways and concepts for very different political and problem-related situations at local level. Under the aspect of exchange of knowledge and experience, it is not only helpful to reinforce communication and cooperation at trans-regional and International level, but an indispensable condition for successful global sustainable development.

This holds true in a similar manner, in particular for the university sector: Scientific research has to be more strongly oriented towards inter- and trans-disciplinary approaches, also towards approaches of ‘Citizen Science’ (e.g. Finke 2014). Last but not least from my own long experience in university teaching for ESD I would like to stress the advantages of a local approach for ESD for a practical and qualifying commitment which—at the same time—could be very useful for local ELSD.

This, perhaps utopian, idea of a ‘learning global community’ for sustainable development of many actively committed citizens strongly disagrees to neoliberal economic principles of development, which are unmistakably unsustainable, not to

mention violent waging of conflicts. In this context, we must be aware of other challenges for SD brought about by increasing processes of migration and the urging problem of how to cope with the large number of refugees and their precarious situation in their countries of origin. ESD, therefore, must always imply intercultural education for peace and justice.

References

- Aalborg-Charta (1994) European cities & towns towards sustainability, Aalborg
- Becker G (1997a) Lokale agenda 21. Aufgaben und Chancen für urbane Umweltbildung und Eine-Welt-Bildung. In: DGU-Nachrichten, H. 15, pp 71–82
- Becker G (1997b) Perspektiven lokaler Umweltbildung im Kontext einer nachhaltigen Stadtentwicklung. In: Kaufmann-Hayoz R, Defila R, Flury M (eds) Umweltbildung in Schule und Hochschule, pp 127–136
- Becker G (2001) Urbane Umweltbildung im Kontext einer nachhaltigen Entwicklung. Opladen 2001 (digital ad-on (2015) Osnabrück - www.verlag.nuso.de)
- Becker G (2008) Bildung für nachhaltige Entwicklung als reale Utopie. In: Gottschlich D et al (eds) Reale Utopien. Perspektiven für eine friedliche und gerechte Welt. Köln, pp 166–179
- Becker G, Dagbaeva N (eds) (2009) Bildung für nachhaltige Entwicklung. Interkulturelle Erfahrungen, Osnabrück, Ulan-Ude
- Becker G (2013) Education for sustainable development as a task of cities: experiences from Osnabrueck. In: Ecology, education, society: problems and prospects of effective collaboration. Ulan-Ude, pp 8–12
- Becker G (2014) Osnabrück. In: Vom Projekt zur Struktur. Projekte, Maßnahmen und Kommunen der UN-Dekade „Bildung für nachhaltige Entwicklung“, Bonn, pp 154–155
- Becker G (2016): Urbane Bildungslandschaften für nachhaltige Entwicklung (in preparation)
- Bleckmann P, Durdel A (eds) (2009) Lokale Bildungslandschaften. Perspektiven für Ganztagschulen und Kommunen, Wiesbaden
- Bleckmann P, Mindermann F, Schmidt V (eds) (2012) Bildungslandschaften: Mehr Chancen für alle. Wiesbaden
- Bollweg P, Otto H.-U (eds) (2011) Räume flexibler Bildung. Bildungslandschaft in der Diskussion Bielefeld
- Coelen Th, Heinrich AJ, Million A (eds) (2015) Stadtbaustein Bildung. Wiesbaden
- Coates M (ed) (2010) Shaping a new educational landscape. Exploring possibilities for education in the 21st century, London
- Delors J et al (1996) Learning: the treasure within. The report to UNESCO of the International Commission on Education for the Twenty-first Century, Paris
- DKJS (Deutsche Kinder- und Jugendstiftung) (2010) Potenziale Lokaler Bildungslandschaften. Berlin
- DKJS (Deutsche Kinder- und Jugendstiftung) (2014) Wie geht's zur Bildungslandschaft? Berlin
- DST (Deutscher Städtetag) (2007) Aachener Erklärung. Bildungskongress 2007 in Aachen: "Bildung in der Stadt" Aachen
- DST (Deutscher Städtetag) (2013) Münchner Erklärung. Bildungskongress 2012 in München: "Bildung gemeinsam verantworten" München
- DVÖPF (Deutscher Verein für Öffentliche und Private Fürsorge e.V.) (2009) Empfehlungen des Deutschen Vereins zur Weiterentwicklung Kommunaler Bildungslandschaften, Berlin
- DUK (2011) UN Decade of Education for Sustainable Development 2005–2014 National Action Plan, Bonn
- DUK (2013) Strategy ESD 2015+, Bonn
- DUK (2014a) UN-decade with impact—10 years of Education for sustainable development in Germany, Bonn

- DUK (2014b) Vom Projekt zur Struktur. Projekte, Maßnahmen und Kommunen der UN-Dekade „Bildung für nachhaltige Entwicklung“, Bonn
- DUK (2014c) Nachhaltige Entwicklung auf kommunaler Ebene durch Bildung voranbringen, Bonn
- Elfert M (2015) UNESCO, the faure report, the delors report, and the political utopia of lifelong learning. *Eur J Educ H.* 1(2015):88–100
- Faure E et al (eds) (1972) *Learning to be. The world of education today and tomorrow*, Paris
- Fischbach R, Kolleck N, de Haan G (eds) *Auf dem Weg zu nachhaltigen Bildungslandschaften. Lokale Netzwerke erforschen und gestalten*. Wiesbaden 2015
- Finke P (2014) *Citizen Science. Das unterschätzte Wissen der Laien*, München
- Fitzgerald HE, Zientek R (2015) Learning cities, systems change, and community engagement scholarship. In: *New directions for adult and continuing education*, H. 145 *Learning Cities for Adult Learners 2015*, S. 21–33
- Heinrich-Böll-Stiftung (2011) *Kommunale Bildungslandschaften*. Berlin
- Heinz W (2015) *(Ohn-)Mächtige Städte in Zeiten neoliberaler Globalisierung*, Münster
- Jahrbuch BNE (2015) *BNE reloaded*, Wien
- Juceviciene P (2010) Sustainable development of the learning city. *Eur J Educ* 45(3):419–436
- Kearns P (2012) Learning cities as healthy green cities: building sustainable opportunity cities. *Aust J Adult Learn* 52(2):368–391
- Kelb V (ed) (2013) *Gut vernetzt? Kulturelle Bildung in lokalen Bildungslandschaften*, München
- Mattern P, Lindner M (2015) Warum Bildungslandschaften? Einige Überlegungen zu Form und Funktion einer eigenartigen Figur. In: *Widersprüche*, H. 135, pp 81–95
- OECD (2002) *Cities and regions in the new learning economy*, Paris
- Osborne M et al (2013) Learning cities: developing inclusive, prosperous and sustainable urban communities. *Int Rev Educ* 59:409–423
- Ravetz J (2000) Integrated assessment for sustainability appraisal in cities and regions. *Environ Impact Assess Rev* 20(1):31–64
- Roche S (2015) “We don’t need no education”: the radical implications of lifelong learning. *Int Rev Educ*
- Stoltenberg U (2009) *Mensch und Wald*, München
- Stoltenberg U (2013) Bildungslandschaften für eine nachhaltige Entwicklung, in: *Jahrbuch Bildung für nachhaltige Entwicklung*, Wien, pp 30–37
- Tawil S, Cougoureux M (2013) *Revisiting learning: the treasure within. Assessing the influence of the 1996 Delors Report*, Paris
- UN (2012) *The future we want*, New York
- UNESCO (2005) *Convention on the Protection and Promotion of the Diversity of Cultural Expressions*, Paris
- UNESCO (2002) *Learning throughout life. Challenges for the twenty-first Century*, Paris
- UNESCO (2013a) *Key features of learning cities, adopted at the international conference on learning cities*, Beijing
- UNESCO (2013b) *Beijing Declaration on building learning cities, adopted at the international conference on learning cities*, Beijing
- UNESCO Education Research and Foresight (UNESCO ERF) (2013) *Rethinking education in a changing world. Meeting of the senior experts’ Group*, Paris
- UNESCO (2014) *Position paper on education post-2015*, Paris
- UNESCO (2015) *Education 2013: towards inclusive and equitable quality education and lifelong learning for all (Incheon Declaration)*, Paris
- Watson C (2015) Evolution and reconstruction of learning cities for sustainable actions. In: *New directions for adult and continuing education*, Issue 145, pp 5–19
- WCED (World Commission on Environment and Development) (1987) *Our common future*, Oxford

Author Biography

Dr. Gerhard Becker 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. A central role was taken over in by the 'Verein für Ökologie und Umweltbildung e.V.' (Association for Ecology and Environmental Education) as the supporting agency and cooperative institution of the University of Osnabrück. 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 of the association, the Working Group Environmental Education (WG EE) of the Local Agenda 21 Osnabrück as well as the Osnabrück 'Landscape of Education for Sustainable Development (LESDD). 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 LESDD 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.