



Educational Reforms and the Ecological Crisis
Internationaler Workshop with C. A. Bowers
6 and 7 November 2009
Swiss Foundation for Environmental Education, Berne, Switzerland

Programme

Day 1
Friday 6 November 2009

Time	What	Who
8.30	Arrival and Coffee	
9 – 10	Purpose of the workshop / Introduction of participants	R. Jucker / C.A. Bowers/ all
10- 10.30	Coffee and networking	
10.30 – 12.30	1. Area: Input and Discussion: The linguistic colonization of the present by the past—and of other cultures	C.A. Bowers All
12.30 – 14.00	Lunch	
14 – 16	2. Area: Input and Discussion: Educational reforms that contribute to revitalizing the local cultural commons and to an understanding of the modern forms of enclosure	C.A. Bowers All
16 – 16.30	Break	
16.30 – 19	Thinking on your feet: Small Group Discussions while walking along the River Aare: How are the Cultural Roots of the Ecological Crisis affecting ESD thinking in the Participants' Countries? Which educational reforms are both needed and effective to counteract this?	All
19.00	Dinner and networking	

Day 2
Saturday 7 November 2009

Time	What	Who
8.30	Arrival and Coffee	
9 – 10	Recap from yesterday: compiling main issues, results, actions and needs for support from all participants	R. Jucker / all
10- 10.30	Coffee and Networking	
10.30 – 12	3. Area: Input and Discussion: Helping students understand the Janus nature of computer mediated learning and communicating	C.A. Bowers All
12.00 – 13.30	Lunch	
13.30 – 15.30	4. Area: Input and Discussion: Education that fosters ecological intelligence	C.A. Bowers All
15.30 – 16	Rounding off: Results and follow-up	R. Jucker / all
16	Closure and departure of participants	

A few additional points about the programme:

- We don't want the sessions to become focused on theory, but rather we want to identify areas including competencies where we can work for change.
- As the days develop we can always make changes in response to what the group thinks would be the most useful – including dropping one of the themes.
- With regards to the document on competencies (RJ_EE and ESD_some reflections_11092009.pdf) we would like to integrate the discussion into each of the topics suggested. We therefore would like to ask you to prioritise those you think are most appropriate for each of the 4 areas in preparation (see lists of competencies on pp. 13-19 of document).
- It would be very helpful indeed for all participants if you could bring documents (including, if possible, in electronic format) on the state of Ecojustice Education / Environmental Education / Education for Sustainability (or whatever you call it) and on educational reform projects in your country. We can then see how we can effectively share them amongst ourselves.

Discussion of Educational Reforms that Address the Cultural Roots of the Ecological Crisis

Author: Chet Bowers

During the short time we have together, we will focus our discussions on the key characteristics and educational reform implications of the following:

- (1) the ways in which the linguistic colonization of the present by the past, which often goes unrecognized by teachers, prevent learning about the community-centered intergenerational knowledge and skills that have a smaller ecological footprint and that provide alternatives to the life-cycle of work, consumerism, indebtedness, and psychological stress;
- (2) the community and ecological importance of introducing students to the nature of their local cultural commons and to the market and other forces that are enclosing them—thus creating greater dependence upon environmentally destructive levels of consumerism;
- (3) the ways in which computer mediated learning, for all of its benefits, undermines the intergenerational knowledge of the local commons while also fostering abstract thinking that marginalizes awareness of local contexts and tacit understandings;
- (4) the nature of ecological intelligence, how it differs from the modern idea of individual intelligence, and how it can be fostered through curriculum reform.

These are admittedly complex issues, and we cannot hope to explore them in great depth. However, by identifying the key characteristics of each, and by relating these characteristics to the cultural patterns we are all familiar with, we should be able to focus most of our time discussing classroom reforms (which includes community participation), sources of resistance (including resistance within teacher education faculties), and how the competencies that Rolf has identified as essential learning and skills might be acquired through cooperation with members of the cultural commons. To be realistic about what we can accomplish, we should be able to identify some effective ways of introducing specific reforms that address the cultural roots of the ecological crisis.

The following is a summary of the key characteristics of the cultural commons and the forces of enclosure, as well as the other three areas of focus. The summary also includes questions that will help to keep our discussions focused on issues that may be understood differently depending on the different cultures represented in our group. Suggestions will also be made about different strategies for introducing ecologically sustainable reforms in settings where educators are pursuing various modernizing agendas, as well as how we can begin to prioritize the community and ecologically sustainable competencies that should be part of the students' education.

Primary Characteristics of the Four Areas of Discussion:

1. The linguistic colonization of the present by the past—and of other cultures.

Students need to be introduced to two aspects of how the metaphorical nature of most of our words carries forward the misconceptions and silences of earlier thinkers who were unaware of environmental limits.

First, students need to learn how many of their patterns of thinking are based on a view of language that too many faculty take for granted—namely, a conduit view of language that is based on a sender/receiver model of communication. This leads to the idea that words refer to real things, that words have universal meanings, and that language is the means for communicating objective facts and information.

Second: Students need to be able to recognize the following if they are to become more critically aware of how they may be relying upon the same patterns of thinking that are now overshooting environmental limits.

1. That most words are metaphors.

2. How the choice of analogs by earlier thinkers and the influence of events continues to frame the current meaning of words—such as freedom, individualism, progress, tradition, markets, and so on.
3. That words (metaphors) have a history and thus may carry forward misconceptions and silences of earlier thinkers who were influenced by the cultural assumptions of their era.
4. That interpretative frameworks, that organized social life over hundreds of years, influence behaviors and values, and marginalize awareness of aspects of experience, are based on root metaphors. Root metaphors such as patriarchy, human-centeredness, individualism, mechanism, progress, etc., illuminate certain ways of understanding while hiding other possibilities.
5. That it is possible, indeed necessary in light of the ecological crisis, to reframe the meaning of much of the modernizing vocabulary by identifying analogs that are culturally and ecologically informed—words such as progress, individualism, intelligence, community, technology, poverty, wealth, etc.
6. That the analogs based on the culture's understanding of the attributes and thus the meaning of words such as woman, weed, wilderness, uncivilized, resource, and so forth carry forward how moral behavior is governed by the cultural understanding of the attributes of the other—person, plant, and physical environment.

Understanding these language issues is fundamental to whether educational reforms in the areas of the cultural commons, introducing and reinforcing ecological intelligence, understanding the appropriate and inappropriate educational uses of computers, and how to most effectively foster the student's competency in ecologically sustainable living, will be successful.

2. Educational reforms that contribute to revitalizing the local cultural commons and to an understanding of the modern forms of enclosure:

Many of the metaphors we rely upon today, and whose meanings were framed by analogs chosen in the distant past and by current evocative experiences (such as experience with different technologies or world shaping events), continue to marginalize an awareness of the ecological importance of the local cultural commons—as well as the diversity of the world's cultural commons. The following represents a highly simplified overview:

1. The cultural commons are largely the intergenerational knowledge, skills, and mentoring relationships that exist in every community—and that are less dependent upon consumerism and a money economy.
2. The cultural commons vary from community to community according to the traditions of ethnic groups and bioregions.
3. They include the knowledge, practices, and intergenerational processes of sharing and renewal in the areas of food, healing, ceremonies, narratives, languages, creative arts, craft knowledge and skill, games, volunteering and community activism, civil liberties and social justice movements, and so forth.
4. The networks of relationships and mentoring in each of these areas has a smaller carbon and toxic footprint—as they involve face to face relationships and a different scale of economic exchange.
5. In an era of downsizing, automation, and outsourcing, the cultural commons provide ways in which people can discover their talents, interests, and experience of community while being less dependent upon full time employment.
6. Not all expressions of the cultural commons meet current standards of social justice and ecologically responsible citizenship—thus the cultural commons generally should not be romanticized.

The pedagogical and curricular implications include the following:

1. Introducing the cultural commons must include descriptions of the various local activities, how they are culturally diverse, and how they are being enclosed—which can lead to in-depth analysis of modern forces that are market oriented and driven by misconceptions and silences in the educational process.
2. The students introduction should also be experienced based—where they are encouraged to do auto-ethnographies of their own cultural commons experiences, as well as engage in surveys of the largely non-monetized activities and relationships in the community. Participating in these groups will

lead to mentoring relationships that will contribute to students acquiring many of the competencies that Rolf has identified as essential to an ecologically sustainable future.

3. The approach should be based more on a phenomenological description of embodied experiences rather than reliance on print based descriptions. It is also more a matter of identifying mentors, the complexity and interdependency of social networks,, as well as making explicit the student's experience of community when involved in different areas of cultural commons.
4. Helping students become explicitly aware of the differences in their embodied experiences (including discovering interests, developing talents, participating in community supportive relationships) as they move between engagement in some area of the cultural commons and in a monetized and work setting is essential to their developing the language necessary for clarifying the differences and for exercising communicative competence in resisting further forms of enclosure.
5. Teachers need to understand their mediating role in helping students become explicitly aware of the difference between experience in the cultural commons and in a monetized relationship. This involves being aware of what questions to ask because of the taken-for-granted nature of their experiences. It also involves not prescribing what the students should think before the relationships and ecological impacts have been fully explored—which may lead students to recognizing aspects of the scientific/industrial culture that are making positive contributions to humankind and to living more ecologically sustainable lives.
6. Creating close alliances with different groups engaged in sustaining different aspects of the cultural commons will help to provide mentoring relationships that will contribute to the students' competencies—which teachers need to prioritize as to whether they are community and environmentally enhancing or whether they contribute to the basic skills and values necessary for being engaged in the money/work-oriented economy.
7. Teachers need to acquire a balanced way of thinking about how to ensure that the students' understanding of the tensions between the cultural commons and the market and other sources of enclosure do not become ideologically driven. The students' need to develop the ability to think critically about how technologies and other aspects of the industrial/monetized cultural influence the cultural commons, and how the cultural commons can be promoted as alternatives to the ecologically destructive impacts of these market liberal globalizing forces. That is, they need to learn that they stand at an important ecological juncture where knowing what to conserve is as important as knowing what needs to be reformed or abandoned entirely.

3. Helping students understand the Janus nature of computer mediated learning and communicating—as well as the Janus nature of cell phones, etc.:

Computers are being used in many ways that are beneficial—indeed, they are now essential to improvements in many areas of life. They also have many important uses in different areas of education, ranging from various uses in school classrooms to accessing information and facilitating research in higher education. But I am suggesting that we focus on the cultural mediating characteristics of computer-based learning and thinking. That is, our brief discussions should focus on the inherent characteristics of computers that reinforce the patterns of thinking that are ecologically problematic, that marginalize the forms of knowledge and relationships essential to the renewal of the cultural commons, and that contribute to cultural colonization by the West. The following characteristics of computer mediated learning, if not fully considered by our group, should be kept in mind in discussing the role of computers in contributing to ecologically sustainable educational reforms.

1. Computer mediated thinking and communication reinforce the conduit view (the sender/receiver) view of language. Thus, computer mediated thinking make it difficult to recognize that words are metaphors, and that they have a history rooted in specific cultural ways of thinking that can be traced to the past. The current idea being promoted in some countries is that students should use computers as the primary resource for constructing their own knowledge. This approach to educational reform ignores that the culture/metaphor/thought connections are hidden by the conduit view of language (the sender/receiver pattern of communication) that computers reinforce.
2. The educational uses of computers, as well as in other settings, involve the encounter of the user (e.g. the student) with the mind of the people who wrote the program. It is not an encounter with an objective representation of some aspect of "reality".

3. Only explicit forms of knowledge can be digitized—and these will reflect the interpretive framework of the observer. That is, the aspects of cultural experience that are taken for granted, as well as tacit understandings and the lived context of human with human, and human relationships with the natural environment, cannot be digitized. Even videos of experience are unable to represent personal memory, taken for granted patterns of thinking, and other internal states of consciousness. In a twist in the Cartesian mind/body separation, the visual and audio dimensions of experience that can be digitized are limited to the aspect of embodied experience that are accessible to the outside observer, which will be influenced in turn by the assumptions that the observer brings to the relationship. What the outside observer cannot digitize are the internal states of consciousness—including the Other's way of thinking of self-identity.
4. Computer mediated learning and communication carries forward the gains and losses associated with the tradition of print-based storage and communication. Like other uses of print, computers reinforce abstract thinking and communication which easily leads to assuming that print-based representations of reality can be generalized across cultures.
5. Educational software programs are based on the taken for granted patterns of thinking of the people who create them—and often reinforce the assumptions that further impede the process of relational thinking that is an aspect of ecological intelligence.
6. There are many ways in which computers can be used to map green spaces, represent energy and toxic flows in the environment, and connect members of the community who are engaged in sustaining the local cultural commons.
7. Teacher education programs need to introduce future teachers to the cultural mediating characteristics of computers. This would include the issues already mentioned. This should lead in turn to introducing students to the questions they should ask about the cultural assumptions being reinforced in software programs, as well as to considering how the increased reliance upon computers leads to greater dependence upon the money economy, increases demand on sources of energy, and increases exposure to the toxic chemicals when computers are discarded.

There are too many issues to be discussed in the short time we have together. However, the list of the cultural mediating characteristics of computers will be helpful as we discuss how their use in the classroom influences the student's development of ecological intelligence.

4. Education that fosters ecological intelligence:

Ecological intelligence is not new to human experience. It has been the basis of survival for many diverse cultures that go back to the first humans who learned to give careful attention to the changing patterns in the local natural environment. Humans learned from observing relationships and changes in their environment, which Gregory Bateson now refers to as the differences which make a difference in the social and natural environments. The occurrence of differences circulating through both the cultural and natural ecological systems, as Bateson points out, are the basic units of information, and are the dominant characteristic of all life forming and sustaining processes ranging from micro to macro systems. Ecological intelligence involves taking account of the differences that make a difference, and responding to what is being communicated through relationships in the larger cultural and natural ecologies that the person participates in—including the linguistic ecology that may contribute to undermining the survival of the life sustaining systems we are dependent upon. In short, the exercise of ecological intelligence involves being fully present in the moment in a way that allows for giving direct attention to the patterns and relationships that are part of the field of experience—and for considering the consequences that follow from one's actions. As the current emphasis on print based thinking fosters abstract thinking that often marginalizes giving attention to the immediate and long-term ecological impact of one's behavior, educators face the special challenge of being able to recognize some of the ways in which the educational process may contribute to the ecological collapse of the natural systems studied by Jared Diamond. Educators also face the challenge of recognizing how to introduce curriculum reforms that contribute to the recovery of ecological intelligence within our modern context. First to be identified are the ways in which teachers reinforce patterns of thinking, values, and behaviors that undermine various cultural approaches to exercising ecological intelligence. Then the patterns that reinforce the exercise of ecological intelligence will be listed.

(A) Ways in which ecological intelligence is undermined:

1. Reinforcing the idea that the student should seek to be more autonomous—which occurs when students are encouraged to construct their own knowledge and values.
2. Reinforcing the pattern of thinking that represents plants, animals, people, events, data, and so forth as independent entities.
3. Reinforcing the idea that change is inherently progressive in nature, and that critical thinking is the engine of change.
4. Reinforcing the idea that the individual is an independent thinker, observer, and source of action on an external environment (the Cartesian mind/body separation).
5. Reinforcing the idea that traditions obstruct progress, that competition leads to the best ideas and plans of action, and that science and technology will solve all environmental problems
6. Reinforcing the idea that words refer to real things and events, and can be universally generalized--and that there is such a thing as objective knowledge and data.

(B) Ways in which the exercise of ecological intelligence is reinforced:

1. Encouraging students to recognize that life sustaining processes always involve relationships, including how ideas, values, events, behaviors, policy decisions and so forth are embedded in and influence interacting cultural and natural systems. The “difference which makes a difference” that Bateson says represents a basic unit of information is another way of saying that relationships are an inescapable aspect of life forming and sustaining processes. The nature of the relationships may also be driven by what he refers to as an ecology of bad or life destroying ideas and values.
2. Encouraging students to recognize that the language they take for granted is part of a linguistic ecology—that words have a history and when this is not recognized may lead to relying upon earlier ways of thinking that provided the conceptual basis for the Industrial Revolution that has now entered the digital phase of globalization. There is also a need to encourage students to identify culturally and ecologically informed analogs that will reframe the meaning of words and thus their ability to consciously recognize the relationships that are ecologically unsustainable as well as those that are *not*.
3. Encouraging students to recognize how abstract thinking marginalizes the need to give attention to the immediate context—and the patterns within different cultural and natural systems that connect.
4. Encouraging students to recognize that critical thinking has a role to play in the exercise of ecological intelligence, but that it should take account both of what needs to be intergenerationally renewed and what needs to be radically changed. Students should be encouraged to examine how a human-centered view of the role of critical thinking leads to critical thinking being used by corporations to bring more aspects of natural systems and the cultural commons under the control of market forces.
5. Encouraging students to consider the differences between oral and print based forms of cultural storage and communication—especially how these differences take account of local cultural and natural systems contexts.
6. Encouraging students to shift from thinking of themselves as autonomous actors and observers of an external social and environmental world to basing their self-identity on how their relationships contribute to the well-being of others in both the cultural and natural ecologies they are embedded in.

A few particularly relevant sources:

Gregory Bateson, 1972. Steps to an Ecology of Mind, Pp. 315-320.

C. A. Bowers, two online books:

- Toward a Post-Industrial Consciousness: Understanding the Linguistic Basis of Ecologically Sustainable Educational Reforms (<http://cabowers.net/pdf/Book%20on%20language.pdf>)
- Educating for Ecological Intelligence. (<http://cabowers.net/pdf/Book%20on%20E-Intell.pdf>)
- For further online books see: <http://cabowers.net/CAPress.php>

Fritjof Capra, 1996. The Web of Life. Pp. 17- 75.

Rolf Jucker, 2009. "Some Reflections on Environmental Education and Educating for Sustainable Development in Switzerland". Unpublished manuscript. (attached)

Arron Stibbe (editor), 2009. The Handbook of Sustainability Literacy. Green Books. (see: <http://www.sustainability-literacy.org/>).

Biography of C.A. Bowers

Chet Bowers wrote his first book on the connections between education, cultural ways of knowing, and the ecological crisis in 1974. The title of the book was *Cultural Literacy for Freedom*. Since then he has written over 95 articles, with 17 books appearing with various publishers. This phase involved an examination of how language reproduces ways of thinking that were formed before there was an awareness of ecological limits, and the connections between emancipatory/transformational ways of thinking and the globalization of the West's industrial culture. More recent articles and books focus on the educational implications of eco-justice for Third World cultures, the prospects for future generations, and the need to revitalize the world's diverse cultural commons as sites of resistance to economic globalization and further environmental degradation.

C. A. (Chet) Bowers holds a Ph. D. from the University of California in educational studies (with an emphasis on education and social thought), has taught at the University of Saskatchewan (1962-1967), University of Oregon (1967-1992), Portland State University (1993-1998), and been granted emeritus status in 1998. Adjunct professor of environmental studies, University of Oregon (1998-2005), currently Courtesy Professor of Environmental Studies at the University of Oregon.

Teaching Appointments at Other Universities: University of California, York University, Taiwan Center for European and American Studies, Northern Arizona University, University of British Columbia, the Chinese University of Hong Kong

Publications:

Books: *The Progressive Educator and the Depression: The Radical Years* (1969), *Cultural Literacy for Freedom* (1974), *The Promise of Theory: Education and the Politics of Cultural Change* (1984), *Elements of a Post-Liberal Theory of Education* (1987), *The Cultural Dimensions of Educational Computing: Understanding the Non-Neutrality of Technology* (1988); (with David Flinders) *Responsive Teaching: An Ecological Approach to Classroom Patterns of Language, Culture, and Thought* (1990); *Education, Cultural Myths, and the Ecological Crisis: Toward Deep Changes* (1993); *Critical Essays on Education, Modernity, and the Recovery of the Ecological Imperative* (1993); *Educating for an Ecologically Sustainable Culture: Rethinking Moral Education, Creativity, Intelligence, and Other Modern Orthodoxies* (1995); *The Culture of Denial: Why the Environmental Movement Needs a Strategy for Reforming Universities and Public Schools* (1997); *Let Them Eat Data: How Computers Affect Education, Cultural Diversity, and the Prospects of Ecological Sustainability* (2000); *Educating for Eco-Justice and Community* (2001). *Detras de la Apariencia: Hacia la descolonizacion de al educacion* (2002). *Mindful Conservatism: Rethinking the Ideological and Educational Basis of an Ecologically Sustainable Future* (2003), *Rethinking Freire: Globalization and the Environmental Crisis* (co-edited with Frederique Apffel-Marglin) 2005; *The False Promises of Constructivist Theories of Learning: A Global and Ecological Critique* (2005); *Revitalizing the Commons: Cultural and Educational Sites of Resistance and Affirmation* (2006).

Journal Publications: Over 95 articles have appeared in education journals, as well as in such journals as *The Dalhousie Review*, *Manas*, *Main Currents in Modern Thought*, *The Trumpeter*, *Environmental Ethics*, *The Humanities*, *American Indian Quarterly*, *Capitalism Nature Socialism*, *Journal of Political Ecology*, *Language and Ecology*, *Tikkun*.

Invited to speak at 34 universities in the United States and 35 universities in other parts of the world, including the University of Trondheim, University of Zagreb, University of Queensland, University of Cape Town, Rhodes University, York University, University of Toronto, the Chinese University of Hong Kong, Trinity College (Dublin), Universidad Catolica Boliviana San Pablo. Recently invited to lecture in 5 German cities. Also asked by Vice-President Al Gore to be the featured speaker at a dinner/seminar (held at the Gore residence) on the influence of metaphorical thinking on environmental and technology policies.



Educational Reforms and the Ecological Crisis

Internationaler Workshop with C. A. Bowers

6 and 7 November 2009

Swiss Foundation for Environmental Education, Berne, Switzerland

Report

Summary of aims and results

There were three main aims of the workshop:

1. to enable a small international group of participants to work together directly with C.A. Bowers whose ground-breaking ideas go right to the roots of our current ecological crisis
2. to provide space and time for all participants to exchange and reflect thoroughly on fundamental questions which underpin our daily work in environmental education or education for sustainable development, but for which the normal work routine leaves little time.
3. to discuss and agree on concrete steps which would enable real change towards a more sustainable future in our respective spheres of influence.

The workshop which would not have been possible without the generous support by the Hamasil Stiftung and the Staatssekretariat für Bildung und Forschung SBF, brought together 16 participants from the US, Zambia, the UK, Norway, Italy, Germany, Canada and Switzerland. Thanks to the very diverse backgrounds of the participants which ranged from higher education lecturers, media literacy specialists and teacher trainers to curriculum developer and independent consultant we were able to foster a supportive atmosphere and openness in exchange which made the best of each others resourcefulness and nurtured a communal learning process of mutual benefit. The structure of the workshop deliberately provided ample time for discussion, rather than focussing on an over-reliance on a proliferation of papers. Led by the skilfully focussed inputs by C.A. Bowers which provided a sound basis for intense discussion and invited a critical perspective we were able to address in some depth the following key characteristics and educational reform implications of the following:

- (1) the ways in which the linguistic colonization of the present by the past, which often goes unrecognized by teachers, prevent learning about the community-centered intergenerational knowledge and skills that have a smaller ecological footprint and that provide alternatives to the life-cycle of work, consumerism, indebtedness, and psychological stress;
- (2) the community and ecological importance of introducing students to the nature of their local cultural commons and to the market and other forces that are enclosing them – thus creating greater dependence upon environmentally destructive levels of consumerism;
- (3) the ways in which computer mediated learning, for all of its benefits, undermines the intergenerational knowledge of the local commons while also fostering abstract thinking that marginalizes awareness of local contexts and tacit understandings;
- (4) the nature of ecological intelligence, how it differs from the modern idea of individual intelligence, and how it can be fostered through curriculum reform.

**Stiftung
Umweltbildung
Schweiz**

Monbijoustrasse 31
3011 Bern
Tel. 031 370 17 70
Fax 031 370 17 71
rolf.jucker@sub-fee.ch
www.umweltbildung.ch

Due to the willingness of the participants to openly engage in a mutual process that might shift, change or even profoundly shake some of one's deeply held convictions, we were able to turn the two days into a real learning process for everybody present. This was not only visible during the vivid discussions in the four workshop blocks, but also over lunchtime, in the late afternoon breaks and over dinner on Friday evening. The general feedback of the participants at the end underlined this impression: they were very grateful that this unique opportunity to work together with C.A. Bowers in such a sustained way over two days was offered to them. They felt privileged to have been part of the workshop and acknowledged that it has given them a lot to think about and a fresh perspective on the on-going issues that concern us.

The fact that the aims could be so successfully reached was largely due to the small size of the group which gave each participant enough time and space to be fully present and interact. On the other hand it was dependent on the willingness to share and the openness to learn which cannot be preplanned but developed very quickly in the group. This can also be seen from the future projects for collaboration which have been collectively developed and agreed at the end of the workshop (see below under Projects and ideas for further collaboration on p. 9).

Detailed notes:

These notes are to be read in conjunction with the programme which includes succinct summaries by C. A. Bowers on the four areas of discussion.

Day 1

Friday 6 November 2009

Introduction of participants

Prompted by the invitation of the workshop moderator to explain why they worked in the field and what had been their best experience or personal memory in EE/ESD, a rich diversity became apparent which I want to summarise here:

- Various participants emphasised that one main reason for working in the field was their interest in bridging the gap between humanities, social and natural sciences.
- Another common interest was systems thinking and systemic approaches to learning
- Various interest and experience in working with the land, growing food, working in and with forests transpired, in other words a rootedness in place and in one of the most important life-sustaining processes: growing food (also as a pedagogical resource for place based learning).
- For almost all, the relationships in a learning process was critical for success.
- The backgrounds and professions were very diverse: university lecturers in mathematics, systems thinking, deep ecology, teacher trainers with an interest in action research projects, systemic thinking, holistic approaches and the political and social dimension of EE, community educators working on bioregional learning projects and in regional parks, chemistry teacher trainer with an interest to bring social context into science teaching, member of the international Monitoring and Evaluation Group for the UN Decade on ESD, a Media education teacher with an interest to fuse media literacy and ecology in a bioregional perspective, ESD researcher writing a Ph.D. on the sustainable design of educational buildings as a catalyst for change in systems, outdoor education specialists and youth educators with a specific focus on participative campaigning, curriculum developers with an eye on learning arrangements and whole school development.

Resources:

- Arne Naess (Author), with Per Ingvar Haukeland: *Life's Philosophy: Reason and Feeling in a Deeper World*, transl. by , Roland Huntford. Atlanta: University of Georgia Press, 2008. ISBN-10: 0820332526, ISBN-13: 978-0820332529
- Antonio López: *Mediacology: A Multicultural Approach to Media Literacy in the Twenty-first Century*. New York: Peter Lang, 2008 (Counterpoints: Studies in the Postmodern Theory of Education). ISBN-10: 082049707X, ISBN-13: 978-0820497075.
- Arron Stibbe: *The Handbook of Sustainability Literacy*. Dartington: Green Books, 2009. (see: <http://www.sustainability-literacy.org/>).
- London South Bank University Education for Sustainability Programme: <http://www.lsbu.ac.uk/efs/>
- A Cross-Curricular Framework for Global Development Education in the Context of Education for Sustainable Development: short version: http://www.bne-portal.de/coremedia/generator/unesco/en/04_The_20UN_20Decade_20in_20Germany/06_Publications_20and_20documents/Cross_20Curricular_20Framework.pdf, long version: http://www.bmz.de/en/service/infothek/unterricht/KMK_langfassung_en.pdf
- Transfer 21: Inhalte, Ergebnisse, Herausforderungen: <http://www.transfer-21.de/daten/materialien/Handreichung.pdf>, <http://www.transfer-21.de/daten/materialien/Begleitheft.pdf>; short flyer in english about transfer21: http://www.transfer-21.de/daten/materialien/t21_flyer_engl.pdf.

1. Area: The linguistic colonization of the present by the past – and of other cultures

C.A. Bowers:

- Approach is based on criticism of constructivist theory of learning which like many of today's theories are based on idea of language as a conduit (sender – receiver, words represent things; cf. Michael Reddy)
- This conduit view of language ignores that words have a history, are metaphors. Learning always takes place by metaphorical thinking: new things are always explained by known metaphors. The meaning of words is framed by the analogs selected by people in the past who were unaware of the ecological limits. These analogs also lay claim to universal validity.
- Words carry forward meanings from past cultures. They represent particular ways of mapping the world and are morale templates of a culture (i.e. root metaphor patriarchy).
- The constructivist idea that the autonomous individual creates his own morale concepts, when the words s/he uses carry forward morale concepts from the past, is untenable. It would be more accurate to say that students are being thought by past morale concepts.
- Root metaphors provide the taken for granted explanatory frameworks that cover whole aspects of life and which influence all disciplines. Through such root metaphors language carries forward ideologies of earlier times. Particularly forceful examples for root metaphors from the industrial revolution are: patriarchy, anthropocentrism (Book of Genesis), mechanism, individualism, change = progress, economism, evolution, history, primitive-civilised dualism, ecology.
- As root metaphors are interpretative frameworks that are taken for granted and influences our understanding over a wide range of things, the important questions then become: what are the analogs, the vocabulary which are left out by particular root metaphors? To what are we not paying attention because it is left out? How do we rethink dominant root metaphors (such as individualism and mechanism) so that they don't exclude, are not so reductionist? How do we engage students in the updating of the root metaphors that gave conceptual direction to the industrial/consumer culture that is overshooting environmental limits?
- A variety of root metaphors interact and support each other (such as evolution, progress, development, ...)
- If, as Bateson suggests, ecology should be the root metaphor, how does this change our metaphors of individualism and intelligence?

Discussion:

- Education means that students are socialised into a way of thinking. It is a conceptual map which is intergenerationally carried forward as the student learns the language of her/his culture. Yet Bateson makes clear the distinction between map and territory. We cannot function without maps, but we need maps which overcome the abstraction of science and allow us to connect to life, the concrete, the territory, the felt, real world and which allow us to interact with place. The challenge for education thus becomes: how do we root back into the cultural commons of a place. It was then noted that the term territory, at least in German, is problematic because it has strongly aggressive connotations. It might be better to talk of home range or home area.
- The film *The Future of Food* (see below) is a useful tool in classes to show how a particular mindset has influenced our thinking about food on all levels.
- It was suggested that looking at the history of maps is a very good way to show how older ways of seeing influence our own understanding (see below: curriculum by Antonio).
- We use language to communicate about relationships between human beings, and the natural environment. As language is metaphorical, the analogs that frame the meaning of words carry forward the culture's moral templates associated with the analog (e.g. the early analogs that represented the attributes of a woman, wilderness,, a weed, and so forth. Many of the words we use today carry forward the moral templates that governed human behavior toward each other (especially minority groups) and the environment. Educators need to be aware of how the metaphorical nature of the language carries forward the moral templates of the culture.
- It seems important that we abandon an understanding of learning as happening inside an individual's head. Learning, as Bateson shows, is being in relationship, experiential, action and

place-based. Therefore it is important to revitalise the Commons, to get learners out into the forest, to other places. (see Keith Basso below) At the same time, it is also important to realize and inquire into the “other” places and relationships within which we live; these most likely, enclosed places/relationships offer opportunities to articulate the differences that define that which exists as part of the commons, that which does not, and perhaps, how what is conceived as being enclosed might be reformed to become part of the commons.

- There was a strong feeling that teacher education is generally outdated [and/or perhaps, misinformed], that the more interesting learning processes are taking place in other contexts, particularly in communities.

Resources:

C. A. Bowers:

- Toward a Post-Industrial Consciousness: Understanding the Linguistic Basis of Ecologically Sustainable Educational Reforms (<http://cabowers.net/pdf/Book%20on%20language.pdf>)
- Educating for Ecological Intelligence. (<http://cabowers.net/pdf/Book%20on%20E-Intell.pdf>)
- For further online books see: <http://cabowers.net/CAPress.php>
- The False Promises of Constructivist Theories of Learning: A Global and Ecological Critique. New York: Peter Lang Publishers, 2005. (for a review see: http://www.ecojusticeeducation.org/index.php?option=com_content&task=view&id=49&Itemid=52).

Michael J. Reddy: The conduit metaphor: A case of frame conflict in our language about language. In: *Metaphor and Thought*, edited by Andrew Ortony. Illinois: Northwestern University, 1994 (2nd edition). ISBN-13: 9780521405614 | ISBN-10: 0521405610.

The Future of Food, a film by Deborah Koons Garcia: <http://www.thefutureoffood.com/>. The DVD can be sourced at <https://www.futureoffoodstore.com/>. There is a special educational edition available with additional resources by Michael Pollan on the Cost of Food, School Farming , etc.

Gregory Bateson: *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology to an Ecology of Mind*. Originally published in 1972. University Of Chicago Press, 2000. ISBN-10: 0226039056, ISBN-13: 978-0226039053. See especially pp. 315-320.

Fritjof Capra: *The Web of Life: A New Scientific Understanding of Living Systems*. Anchor, 1997. ISBN-10: 0385476760, ISBN-13: 978-0385476768. See especially pp. 17- 75.

Keith H. Basso: *Wisdom Sits in Places: Landscape and Language Among the Western Apache*. University of New Mexico, 1996. ISBN-10: 0826317243, ISBN-13: 978-0826317247

Sample online curriculum for mapping discussion, developed by Antonio: <http://worldbridgermedia.com/Cartography/>

Robert Romanyshyn: *Technology as Symptom and Dream*. London: Routledge, 1989. ISBN-10: 0415007879, ISBN-13: 978-0415007870: a resource about the introduction of linear perspective and its impact on ecology, recommend by Antonio.

2. Area: Educational reforms that contribute to revitalizing the local cultural commons and to an understanding of the modern forms of enclosure

C.A. Bowers:

- Prefers to speak of Cultural Commons rather than community or society. The term Cultural Commons has as its flip side the term enclosure and thus makes clear what this discussion is all about and why it has a central part in an answer to the ecological crisis. The Cultural Commons are all the shared, non- or less monetised, often traditional aspects of life which contribute to reducing our dependence on consumerism. And language is clearly part of the cultural commons. Enclosure on the other hand means: largely monetised, privately owned.

- A favourite place to show the sustainability of a strong Cultural Commons is Ladakh, which by now is under real threat because of the melting glaciers.
- The class-room can be a 'socio-psychological moratorium' to explore all the questions that would incur penalties outside.
- The debate on the Cultural Commons focuses on competencies which reduce the dependence on the market-economy. But we don't have to invent this: there are still lots of people who have those competencies. The task of education is to help students recognise this in an explicit way.
- The role of the educator is therefore one of a cultural mediator: we always need to ask the question: if you are going to change something, what are you going to conserve?
- The revitalisation of the Cultural Commons seems important because there will be more and more people without work and money, there is increasing alienation from nature (i.e. the sources of survival). On the other hand, there are people who have these skills and want to pass them on.
- On a practical level, it seems as if local sustainability councils for every school as well as working with Deans of Faculty / people in decision-making positions are two sensible ways forward.

Discussion:

- The natural and cultural commons need to be linked to the ecological commons. How can that be learnt? Intergenerational knowledge, tacit knowledge has to be passed on through direct experience, face-to-face contact, learning through practice. Learning is a process in which thinking, acting, situatedness, relational being cannot be separated.
- This discussion is basically about the question of the good life. Thus it raises further questions on the role and function of schools. It is suggested that not the school should change the community, but that change in the community should be reflected through change in schools.

Resources:

- On Ladakh, see the Ladakh project by ISEC: <http://www.isec.org.uk/pages/ladakh.html>, including the book and video by Helena Norberg-Hodge on 'Learning from Ladakh'.

Day 2

Saturday 7 November 2009

3.+ 4. Area: Education that fosters ecological intelligence / Helping students understand the Janus nature of computer mediated learning and communicating

Because the Transition Town movement is a good example for communities trying to revitalise the Cultural Commons Glenn Strachan made a short input on the movement. He drew the attention to the fact that a key concept of the movement is 'resilience' which means building up the means to react constructively to peak oil and other challenges that will face us in the near future. Particularly relevant to our discussion are two of the 12 steps to a transition movement, namely the great reskilling and honouring the elders (see below).

C.A. Bowers:

- The current debate on ecological intelligence (see Daniel Goleman) doesn't question the notion of consumerism. Like the constructivist theory of learning it is based on the notion of an autonomous individual which is incompatible with ecological intelligence as understood here.
- The Industrial Revolution required the construction of the autonomous individual and the destruction of the local Commons. Its world view has no moral limits on enclosure.
- Computers are not neutral. Every technology amplifies or reduces characteristics of our experience. We therefore need to be aware of what we lose and what we gain through the use of a particular technology. Yet teachers are clueless about the culturally mediating characteristics of computers (see Theodor Roszak). We generally start from the assumption that everything can be digitised and therefore the use of computers in teaching is fine. Yet a quick look on what cannot be digitised reveals a long list of things we lose in the process:

Emotions, quality, bodily experiences, responsive reciprocity, relationships, context (unless abstracted), taken-for-granted cultural commons (since we are not aware of it).

- Computers are reinforcing conduit view of language.
- Through IT you meet not 'objective information', but information thought/organised by person who wrote software / put it up
- Computers emphasise the immediate present and near future which are all problematic aspects of print-based cultures which privileges abstract thought devaluing context. In terms of ecological intelligence this is a fundamental problem because we are mostly coming from a print-based form of consciousness against which already Plato warned. It all started with the introduction of the alphabet which abstracts from context. There are fundamental differences between print-based and oral cultures which we need to be aware of (see Havelock and Polany below).
- The central point is one made by Bateson (see above): we routinely underestimate when we bring something to a situation what we will encounter there. Bateson calls this basic aspect of life: "differences which make a difference" (*Steps to an Ecology of Mind*, pp. 315). In other words, Bateson is arguing against the idea that the world we describe is out there, independent of us. It all is imminent mind, a total system. Being aware of all those differences that make a difference is moving us in the direction of an ecological intelligence. Our current root metaphors are not taking this relational view into account, the fact that mind is in it. Part of ecological intelligence is being able to read the system and the differences that make a difference (see for example Sachs' Development Dictionary where he gets a number of writers to analyse our root metaphors, such as development, environment, equality, needs, participation, poverty, progress, etc; see below).
- This means that we are talking about the quality of relationships: how do we get people to value this? It is the natural ability when all the senses are present and the intellectual capacity to reflect on what are the consequences of the differences in a sustainability context.
- It is about getting people to realise where they are dependent on food, air, other beings,..., i.e. not to emphasise independence, but dependence on biosphere. But ecological intelligence is not inherent, it is not socialised at the moment, but ought to. The trouble is that if you can't name the relationships you won't see them and then you won't see what differences your actions introduce. That is why the teacher's role as mediator is so important: needs to ask open questions, so that what is silenced, taken-for-granted, not named is made explicit.
- One option to move forward would be to use retired [ecologically minded!] teachers as mentors for ecological intelligence.

Discussion:

- The point was made that with the introduction of perspective into art in the 14th century the world was from then on seen through the eyes of an individual. This is unlike forms of art for example in China, where you have various perspectives in the same picture.
- Some felt that such a discussion on computers was far too pessimistic and negative, but others stated that there was a real need to rebalance the different perspectives (abstract-print-based and experiential-oral, left-right brain).
- It was stressed that it is not about privileging one over the other, but about a careful assessment of the consequences of whatever approach with a view to the overarching question: does it contribute to community resilience and increased self-reliance and thus a smaller ecological footprint? Does it create "scaleable microcosms of hope", as Jeremy Leggett put it?
- System needs to be understood as an interactive, dynamic whole where everything is in constant relationship, thus moving. And imminence (Bateson) means in this context that intelligence is imminent in the system as a whole. Bateson radically shifts our notion of self / individuality. It is a radically relational view: we are relational beings (cf. Mary Catherine Bateson and Bateson's lectures below). A system is constantly co-creating who we are and what we are.
- In Bali there are languages where you have no 'I', but about 50-60 words for a person being in relationships with others. In learning processes it is important to introduce different cultural maps in order to make explicit other cultural understandings of nature and culture.

- It was stressed that it is not a question of us teaching kids about systems thinking because they are much better at it anyway.
- In this discussion it is important to stress values, such as solidarity. A person is not existing except as a member of a community. This is nicely expressed in the concept of Ubuntu (see below).
- Today teachers are imprisoning children through socialisation in the school system. We should act now to provide a viable alternative through community learning: hands-on place-based learning. For changes have to take place in a place.
- Greenpeace Germany has just introduced a mentoring model where they use retired teachers.
- Storytelling is a very good way of dealing with the issues mentioned: it allows to find room for action, to make decisions, to take positions and to uphold values.
- The 'Leadership for Sustainability' study was mentioned by Glenn (see below) that sought answers to the question: what makes a difference that College leaders become sustainability leaders? The answer was experience outside college.
- We generally have more room for change than we think. We should encourage students, teachers, teacher trainers to go one step further, to exploit the freedom they actually have, to move beyond their fear of doing something they think they are not allowed to .

Resources:

- Transition Towns <http://www.transitiontowns.org/>: This is the best place to start, either follow the links in the text for more information or use the menu on the left.
- <http://www.transitiontowns.org/TransitionNetwork/TransitionCommunities>: This is a list of Transition Towns and many of the towns in the list link to websites with lots more information, although not all.
- Daniel Goleman: *Ecological Intelligence: How Knowing the Hidden Impacts of What We Buy Can Change Everything*. Broadway Business, 2009.
- Don Ihde: *Technics and Praxis*. Dordrecht, Holland, D. Reidel Publishing, 1979.
- Theodore Roszak: *The Cult of Information* Berkeley, University of California Press, 1994.
- Roszak, Theodore, Mary E. Gomes, and Allen D. Kanner (eds.): *Ecopsychology: Restoring the Earth, Healing the Mind*. San Francisco: Sierra Club Books, 1995.
- Eric A. Havelock: *The literate revolution in Greece and its cultural consequences*. Princeton: Princeton University Press, 1982. ISBN 0691093962.
- Karl Polanyi: *The Great Transformation*. Beacon Press, 2001. ISBN-10: 080705643X, ISBN-13: 978-0807056431.
- *The Development Dictionary: A Guide to Knowledge As Power*, ed. by Wolfgang Sachs. London: Zed Books, 1992. ISBN 1856490440, ISBN-13: 978-1856490443
- Gregory Bateson and Mary Catherine Bateson. *Angels Fear: Toward an Epistemology of the Sacred*. New York: Macmillan. 1987.
- Lectures of Gregory Bateson online @ <http://www.archive.org/search.php?query=creator%3A%22Bateson%2C%20Gregory%22> and http://www.youtube.com/results?search_query=Gregory+Bateson+lectures+on+youtube&search_type=&aq=f
- H.R. Maturana and F.J. Varela: *Autopoiesis and Cognition: The Realization of the Living*. Springer, 1991. ISBN-10: 9027710163, ISBN-13: 978-9027710161. and
- H.R. Maturana and F.J. Varela: *Tree of Knowledge*. Shambhala, 1992. ISBN-10: 0877736421, ISBN-13: 978-0877736424.
- Great game to show how sharing leads to replenishing and greed to collapse of systems: <http://www.g-r-e-e-d.com/Nuts%20Game.htm>, suggested by Antonio.
- Game we played with Ueli out in the park: Triangle Game, published in: *The Systems Thinking Playbook*, Vol. III., ed. By L. Booth Sweeney and D. Meadows. University of Durham, NH: 2001. New version out as: L. Booth Sweeney and D. Meadows: *The Systems Thinking Playbook: Exercises to Stretch and Build Learning and Systems Thinking Capabilities*. Chelsea Green Publishing, 2009. ISBN-10: 1603582584, ISBN-13: 978-1603582582.

- Jeremy Narby: *Intelligence in nature*. Tarcher, 2005. ISBN-10: 1585423998, ISBN-13: 978-1585423996.
- UBUNTU DECLARATION On Education and Science and Technology for Sustainable Development: <http://www.deat.gov.za/sustdev/documents/pdf/UbuntuDeclaration.pdf>
- Leadership for Sustainability, research by LSBU and Forum for the Future, published by the Centre for Excellence in Leadership: <http://www.centreforexcellence.org.uk/UsersDoc/SustainabilityResearch.pdf>
- Barry Lopez: *Of Wolves and Men*. Scribner, 1979. ISBN-10: 0684163225, ISBN-13: 978-0684163222.
- Hugh Brody: *Maps & Dreams: Indians and the British Columbia Frontier*. Waveland Press 1997. ISBN-10: 0881339652, ISBN-13: 978-0881339659.
- Chinua Achebe: *Things Fall Apart: And Related Readings*. Houghton Mifflin Harcourt, 1996. ISBN-10: 0395775590, ISBN-13: 978-0395775592.
- Clifford Geertz: *The Interpretation Of Cultures*. Basic Books, 1977. ISBN-10: 0465097197, ISBN-13: 978-0465097197.
- The Story of Stuff: <http://www.storyofstuff.com/index.html>, additional resources: <http://www.storyofstuff.com/resources.html>
- Piece of music related to the theme of transition: can lead to interesting discussions: <http://gingerninjas.com/footprint/peace-poem/>: How much? ("Do I care enough for peace to ride my bike to work?") [suggested by Peter]
- John Croft and his „Dragon Dreaming“ approach: <http://transitionculture.org/2007/02/21/john-crofts-dragon-dreaming-presentations/> [suggested by Peter]
- Ursula K. Le Guin: *The Telling*. Harcourt, 2000. ISBN 978-0441008636.
- Bateson, M. C. *Willing to Learn: Passages of Personal Discovery*. Steerforth, 2004. ISBN-10: 1586420801, ISBN-13: 978-1586420802.
- Bateson, M. C.: *Democracy, Ecology, and Participation*. In: Roger Soder (Ed.) *Democracy, Education, and the Schools*. (pp. 69-86). San Francisco, CA: Jossey-Bass, 1996. ISBN-10: 0787901660, ISBN-13: 978-0787901660.
- Oberg, A., Blades, D. & Thom, J. S. Untying a dreamcatcher: Coming to understand possibilities for teaching students of aboriginal inheritance. *Educational Studies*, 42(2), 2007, 111-139. [this four act play discusses many of the cultural and some of the pedagogical issues that we discussed in our working session. It is written from a perspective informed by an ecological perspective that includes Bateson, Bowers, Maturana/Varela, Capra, and others.]
- Varela, F. *Ethical know-how: action, wisdom, and cognition*. Stanford, CA: Stanford University, 1999. ISBN-10: 0804730334, ISBN-13: 978-0804730334.
- Varela, F. J., Thompson, E., & Rosch, E. *The embodied mind: Cognitive science and human experience* (2nd ed.). Cambridge, MA: MIT, 1996. ISBN-10: 0262720213, ISBN-13: 978-0262720212

Projects and ideas for further collaboration:

- Antonio has created the Berne Working Group on Sustainability Education: <http://sustainability-education.ning.com/group/berneworkinggroup?xgi=32uKKiWLHpzfsn>. Everybody can join the group and Antonio has, as discussed, created 3 discussions on:
 - Further Resources: Please share any relevant links or resources such as Websites, videos, books, curricula, etc. You can also upload files directly to your post (PDF, photos, Word docs, etc).
 - ESD Ecojustice Conference: Please share your ideas about Prof. Overson Shumba's project at the 28th Conference, 7th-10th September 2010 (TBC) by the ENVIRONMENTAL EDUCATION ASSOCIATION OF SOUTHERN AFRICA on "Decade of Education for Sustainable development"

- "Transition" Education : This discussion area is to further develop, discuss and debate the concept of "transition" education, including the name itself. The idea is also to post videos, examples of cultural commons, etc.
- Develop a multimedia curriculum that introduces how teachers can engage students in thinking about the ecological implications of language that carries forward the misconceptions of the past, the nature of the local cultural commons, and the need to make the transition from an individually centered view of intelligence to the daily practice of ecological intelligence. This will be a project of Chet and Antonio.
- Collaboration and input on issues discussed for EEASA-Conference 2010 (see discussion on Berne Working Group on Sustainability Education (above) [Overson]
- Explore connections of the concepts of commons and ecological intelligence to the sub-Saharan Africa moral and ethical framework of Ubuntu. [Overson to draft some thoughts on this and share]
- Comparing and collaborating on educational strategies for (bio) regional parks in context of ESD. Swiss example of Entlebucher Schuelschätz [Per Ingvar, Sandra, Peter, Franziska, Rolf]
- Duel face of critical thinking [Ueli]
- The Story of Stuff (see above): use as a model to elaborate "The Story of Language", "The Story of the Commons". Make it accessible through pictures, drawings. [Chet, Antonio]
- Open campaigning / participative campaigning [Kuno]
- How to nurture positive feelings / the good life [Per Ingvar]
- Share what classes, community groups, etc. have already done/are doing on <http://www.slideshare.net/> or <http://voicethread.com> [Hanne]
- Lead a discussion about leverage points, meaningful points of intervention [Franziska]
- Continuity of the group: develop an EU-funding bid to allow annual meetings of the group which are combined with practical experiences and reflection (Grundtvig, Transversal, Leonardo, Comenius, ...) [Rolf, Reiner, Christine, Glenn, Per Ingvar]
- Truth commissions on the environment / ecological genocide (Joanna Macy, plus: Jane Vella: *Learning to Listen, Learning to Teach: The Power of Dialogue in Educating Adults*. Jossey-Bass, 2002. ISBN-10: 0787959677, ISBN-13: 978-0787959678; William Issacs: *Dialogue: The Art of Thinking Together*. Doubleday Business, 1999. ASIN: B002VLXKSK [Antonio]
- Teacher education: competencies and standards for issues discussed [Overson], ev. ENSI (www.ensi.org) helpful [Christine]
- Publication on examples of communities engaged in this process to nurture the cultural commons [Per Ingvar, Rolf]