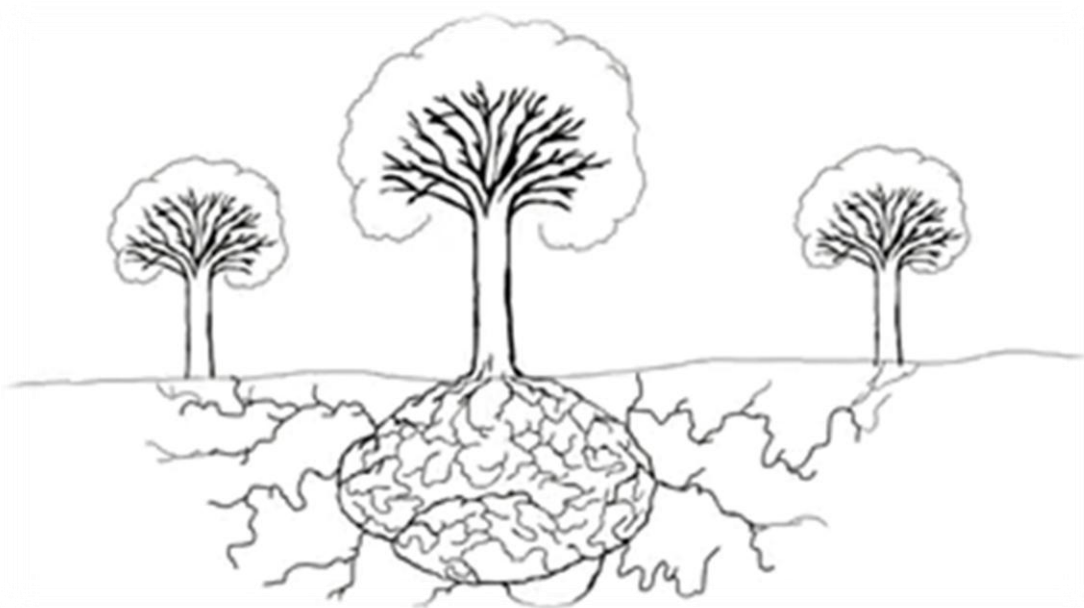


**Tesis doctoral**

# Textos reflexivos en redes internacionales de Educación para el Desarrollo Sostenible

*Análisis del lenguaje evaluativo desde la Teoría de la Valoración*



**Autora:**

*Esther Sabio Collado*

**Directoras:**

*Mariona Espinet Blanch*

*e Isabel Martins*

Bellaterra, Junio 2015

Departament de Didàctica de la Matemàtica i de les Ciències Experimentals

**Universitat Autònoma de Barcelona**

**CSII RAR, by AC (A14)**

**Seminar for teachers and teacher trainers**

## **Teacher Competencies for Education for Sustainable Development**

**Sept. 19th – 24th, 2010  
Innsbruck, Austria**



## **Report**

Regina Steiner  
FORUM Umweltbildung  
[forum.salzburg@umweltbildung.at](mailto:forum.salzburg@umweltbildung.at)



Education and Culture DG

**Lifelong Learning Programme**

This project has been funded with support from the European Commission.

This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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# 1 Summary

The Teacher Training workshop took place in Innsbruck and Aldrans from 19th to 24th of September 2010. 26 persons from 12 different countries took part.

Teacher Education is a prerequisite for Education for Sustainable Development (ESD) providing pupils and adult learners with the skills and competencies they need to take part in creating a Sustainable Development (SD) and Lifelong Learning (LLL). The seminar provided possibilities to discuss and experience quality criteria for ESD and highlighted the competencies that teachers and teacher trainers need in ESD

Outcomes of the EU Comenius Network SEED (the booklet "Quality Criteria for ESD-Schools") and the EU Comenius Project "CSCT" (Curriculum, Sustainable Development, Competences, Teacher Training) and further projects aiming the development of a competency-based curriculum for education for sustainable development in initial teacher education and in-service training institutions served as starting points for the discussions. In a second step the participants discussed how to systematically develop ESD competences and how to implement ESD in Teacher Education.

Keynotes by international experts highlighted the topics "Competences for ESD", "Quality Criteria for ESD schools", "Portfolio as a tool for working on individual and team competences in schools" and others. The participants tried out methods and exchanged experiences, and discussed ways of implementing the findings into their own work. School visits and excursion programmes in the beautiful Tyrolean mountains served as references and also supported the intercultural exchange. The evaluation showed that the participants were highly satisfied with the design of the programme, the input of the experts, the practical experiences, the range of new methods they could try out and also the possibility to exchange and to network.

One of the aims of the seminar also was to contribute to the design of a new Comenius project on the topic of competence portfolio as a tool for fostering and demonstrating ESD and LLL competences.

The workshop was listed in the Comenius-Grundtvig Training Database with the reference number "AT-2010-245-001" and organised by the FORUM Umweltbildung (Environmental education FORUM) and the Pedagogical University of the Tyrol as part of the EU Comenius project "SUPPORT – partnership and participation for a sustainable tomorrow".

Further information at <http://www.umweltbildung.at/support/>

Special thanks to Mag. Gudrun Danter, who helped compiling the report and to Dr. Christine Lechner, who did the English proofreading!

## 2 The Venue

The teacher training course was a cooperation project of the FORUM Umweltbildung together with the Pedagogical University of the Tyrol. The seminar took place partly at the university, but there was also available a room at the hotel for working in groups on the Thursday and Friday. On Monday and Tuesday there were various activities at schools at different places in the Tyrol and on Wednesday morning we had an excursion to discuss different ways of sustainability concerning regional development ("Two Valleys provide an Answer").



Aldrans



Hotel Aldranser Hof



Pedagogical University of the Tyrol (Pädagogische Hochschule Tirol), Pastorstr. 7, A- 6020 Innsbruck



## 3 Description of the activities

On Sunday evening the seminar started with an informal introductory activity in the hotel's seminar room: "Sich vorstellen" (description of ice-breaking activities: see attachment).

On Monday the Seminar started officially with welcoming addresses given by Dr. Christine Lechner (Pedagogical University of the Tyrol), Dr. Regina Steiner (FORUM Umweltbildung), the Vice Rector of the Pedagogical University of the Tyrol, Dr. Werner Mayr, the head of the ECOLOG network of the Tyrol and state superintendent for Primary and Lower Secondary schools and Tyrolean ECOLOG co-ordinator, Dr. Reinhold Wöll, and the co-ordinator of the Pedagogical University ECOLOG team, Andrea Gandler MSC. The introductions were followed by ice-breaking activities, which aimed to establish contacts and to bring the participants together as a group from the beginning.





### 3.1. Visit to Practice Primary School and Practice Secondary School

The Pedagogical University has two practice schools attached, where students have the possibility to observe lessons during the first semester and to try out small sequences or whole lessons themselves in later semesters (for an overview of the Austrian school system see attachment). To give participants an impression of these schools participants were offered lunch and informal discussions with the head and teachers of the practice primary school.



One teacher from this school (Mag. Waltraud Egger) let us take part in a workshop she had prepared for the pupils of the school at the school "ECOLOG Day" in Summer 2010: "The Monster in the River".

On the same day we had the tea break at the Practice Secondary school. We were shown the school garden, planned and built by the students for handcraft of the Pedagogical University together with the handcraft teacher of the school, while the Biology Students together with the Biology teacher of the school were responsible for planting appropriate plants. We had the opportunity to talk to both teachers and to the head of the school.



### 3.2. Quality Criteria for ESD Schools

Dealing with this topic was one of the central activities of the course.

Dr. Christine Lechner gave a lecture to introduce the topic “Quality Criteria in ESD Schools” (see attachment and [seed.schule.at/uploads/QC\\_eng\\_2web.pdf](http://seed.schule.at/uploads/QC_eng_2web.pdf)).

The Quality Criteria for ESD schools were developed by a group of European ESD experts with co-operation being facilitated through the COMENIUS-Network SEED. The aim of the Q.C. is to provide teachers with a tool to assess and evaluate their own school work in the area of ESD, and also to give impulses for development. The document is divided into three sections (Teaching & Learning Processes, School Policy & Organisation and External Relations) and provides examples from each of the 15 areas of action within the sections. For each example a story, the rationale and a list of criteria for good practice are given. During the talk participants were asked to consider actively to which areas the examples given corresponded. The introductory talk provided the necessary information on the structure and concept of the Q.C. so that the next activity could begin! (PDF of the lecture see attachment)

To get to know the 15 quality criteria more in depth we offered a workshop on this topic. Through the workshop the participants gained a working understanding of the Q.C., which enabled them to look at the examples provided at the schools visited on the following day in an objective and professional way. During the workshop participants in the groups moved from the examples provided in the publication to their own classroom and school practice thus sharing knowledge and competences.





## Workshop guidelines –

Example for Worksheet for one of 4 Groups:

### Getting to Know the Q.C.

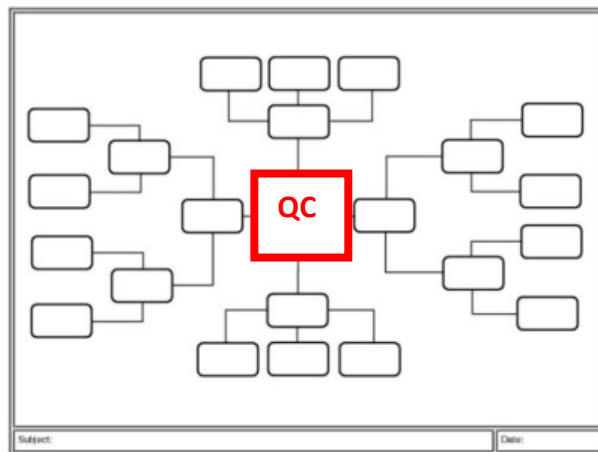
Each should study 4 of the Quality Criteria in detail.

Your colour is Pink & your criteria are: 1, 2, 7, 9

#### Step 1

1. Concentrate on the Rationale & the bullet points.
2. Think of experiences from your own work situation to help illustrate the criteria. Within the group you should find at least one example per criterion.
3. Make a mind-map as an aid.
4. Every member of the group should be able to explain the criteria & the examples to the other groups.

You have one hour



[http://www.mymindmap.net/images/Mind\\_Map\\_Template\\_Multirnd\\_small.jpg](http://www.mymindmap.net/images/Mind_Map_Template_Multirnd_small.jpg)

#### Step 2

1. Find the colleagues from the other groups with the same number. You are now the expert. (Your group is now colour mixed)
2. Together you should move from mind-map to mind-map. The “expert’s” job is to explain the mind-map of his or her former group.

This phase be completed within approximately one hour

The other groups had different sets of Quality Criteria as a basis of working:

Group 2: Your colour is Yellow & your criteria are: 3, 4, 5, 6

Group 3: Your colour is Blue & your criteria are: 10, 11, 12, 13

Group 4: Your colour is Orange & your criteria are: 8, 14, 15



As a next step the participants prepared for the visit to two schools at the following morning. (see p.11)

### 3.3. Teacher Competences for ESD: CSCT and KOM-BiNE

Teacher Competences for ESD – CSCT and KOM-BiNE were the inputs of the lecture of Dr. Regina Steiner. How can the teachers make themselves fit to work in schools for ESD, what are the competences required by teachers to teach ESD? This was the question underlying the project “CSCT” (a COM 2 Project in the framework of ENSI's big project SEED) and a second project “KOM-BiNE” (a research project in Austria developed by professionals participating in the CSCT project and also drawing from the experiences of the CSCT project) (PDF of the lecture see attachment).



The aim of the EU-project CSCT (Curriculum, Sustainable Development, Competences, Teacher Training) was to help to integrate ESD into mainstream curricula of teacher education. The basis for both models was research on the notion of “competence”, on models of competences for SD and on competences for teachers generally. The experiences of the participants from all over Europe also came from case studies on ESD in Teacher Education delivered by every participating institution. The resulting competency models are attempts to give some structure to the complexity of ESD. Both models can serve as

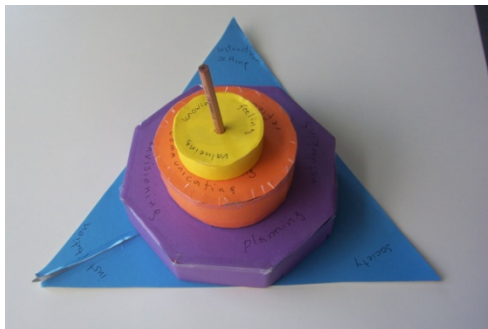
- Frameworks to identify and reflect on ESD competences of teachers or teams of teachers/trainers
- Instruments for orientation, reflection and planning of ESD initiatives by teacher teams
- A template for the design of teacher education courses.

**The CSCT Model:** One of the main findings of the ENSI project Quality Criteria for ESD schools was the perception that for teachers it is not only necessary to have competences in class room management and teaching, but also regarding the whole school as an institution and even the schools external relations. For all these **levels** teachers need specific competences, which are explained within five domains:

- **Knowledge**
- **Systems thinking**
- **Emotions**
- **Ethics and Values**
- **Action**



In addition to these, **overall competences** are needed: **Teaching and communicating** (Learning is understood as a self-steered and active process, which can be fostered but not created, according to the concept of constructivism). **Visioning** and creating new perspectives are important tasks because the transformative role of education is a key issue in ESD. Action will change as a product of **reflecting** and visioning. **Networking** with partners in and out of school is necessary in order to create a learning environment of real life problems and issues in society. For this overall competency also communication, conflict solving and team competences are necessary as well as planning and organizing skills.



The **KOM-BiNE** model has a slightly different structure: At the core of the model there is a team of teachers or educators in formal and non-formal education for ESD. It is assumed that especially in a complex field like ESD it is not possible for one single person to command all the competences required. Only by the interaction of different persons and their joint utilisation of individual strengths and abilities can the requirements for ESD be met in the best possible way.

The inner cylinder contains highly personal elements, subdivided into three parts: **knowing** as knowledge of facts or content on SD and ESD and knowledge of methods (domain-specific knowledge with respect to ESD), **valuing** (clarification of and dealing with values), and **feeling** (being aware of and dealing with emotions connected with ESD). All three are closely interconnected.

One activity that is important for “good teaching” in general, but especially so for imparting ESD is constant **reflection**. This activity is indispensable to one’s critical review of oneself, of one’s knowledge, values, and sentiments. But reflection is also an essential prerequisite of action, i.e. of manifesting one’s personal abilities and skills to the outside world. Also communicating (of knowledge, values and emotions, visions and plans) is a prerequisite for co-operation in ESD.

In the outermost circle of the diagram and thus in the area closest to the social fields of action the activities **planning, organising, and networking** are located. Planning and organising denote the development of visions and plans as well as the appropriate steps towards their realisation.

The teacher competences are formulated as generically as possible to serve as a framework for all kinds of educators for all subjects and target groups. There are lists of more concrete differentiation, but those have to be evaluated and discussed - in the course of putting any ESD program into action they will be constantly further developed and new experiences will feed into this process. In other words, the concepts themselves will turn into objects of reflection and development.



### 3.4 Quality Criteria in Practice

- Visit to Primary School (VS Johannes Messner Schwaz)
- Visit to Upper Secondary Grammar School (PORG Volders)

The heads of the two schools had been contacted several weeks before and asked to suggest “Quality Criteria”, which could be observed at their schools and on which areas the school would like to receive feedback.

The Primary School, “VS Schwaz” offered the following ...

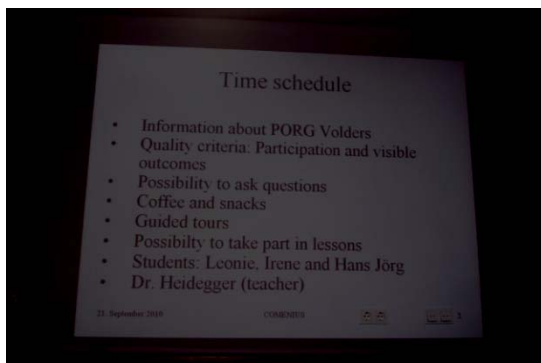
- Area of teaching and learning approach
- Area of a “culture of complexity”
- Area of value clarification and development
- Area of networking and partnership

The Upper Secondary Grammar School “PORG Volders” offered the following...

- Area of participation
- Area of visible outcomes at school

#### 3.4.1. Visit to Upper secondary Grammar School “PORG Volders”

The headmaster welcomed the group at PORG Volders and gave an overview of activities at PORG Volders. Then there was the opportunity to talk to six pupils and discuss concrete questions.



After an opulent snack each of three pupils took small groups of 4 to 5 visitors and guided them through their school. The participants could have short glimpses at regular lessons, they could ask personal questions to their guides and observe interesting details out and in classrooms and take notes concerning the questions on the selected quality criteria.

### 3.4.2 Visit to Primary School „VS Johannes Messner Schwaz“



Teachers of the school and the participants of the TT course gathered in the main hall for an introductory talk, then they divided into 4 small groups and participated in 4 consecutive workshops which had been prepared for the children together with the visitors. The participants could observe while taking part in the lessons and were thus able to experience four different themes and four different classes.



In the afternoon the two groups discussed their experiences separately and prepared a reflective feedback for each school, mainly concerning the selected quality criteria, but also some general remarks. (see written feedback sheets in the attachment). At the end of the day the main findings were presented to the other group and discussed in a plenary session.



In the evening after meal in the city a Historian from the Pedagogical University, Mag. Irmgard Senhofer, gave a talk on the history of Innsbruck and guided a tour through the Old Town.



### 3.5 Excursion “Sustainability? Two Valleys provide an Answer”

Dr. Hans Hofer and Dr. Franz Riegler (Pedagogical University of the Tyrol) prepared and led this excursion through the Stubaital and the Gschnitztal which showed two different approaches on regional development in the Alpine region. This programme is a regular part of a compulsory seminar for student teachers of Biology and Geography.

In the Stubaital the traditional Iron industry did not stop after the raw material (Iron and Charcoal) had been exhausted, but they still work using imported scrap-iron and black coal and produce highly specialised metal tools. One of the reasons for the sustainability of the industry is that a school for metal workers was established after World War I and became pivotal to the local industry. Nowadays, many immigrants have found employment here. In former times most of the inhabitants of the valley were farmers. Due to an extensive form of tourism many of them abandoned the farming and now work in the big hotels or the glacier ski region.



Despite this development, farming still exists and we were able to visit a Biogas plant where a farmer collects organic-waste from the hotels and farmers in the valley and has thus created an additional area of sustainable productivity.

The other valley – the Gschnitztal – is still a very quiet valley with traditional farming and only limited touristic infrastructure mainly for mountaineering, cycling and cross-country-skiing. The disadvantage of this intensively sustainable approach to nature is that the majority of the inhabitants is forced to commute back and forth to work in the towns.

This practical example as an impulse for discussions on Sustainability was very appealing to the participants.



### 3.6. Teacher Competences for ESD to foster SD Competences of Pupils – The Models “Gestaltungs-Kompetenz” and the “Competency Model of Global Education” in Germany

Dr. Reiner Mathar presented the two Models “Gestaltungs-Kompetenz” and “Competency Model of Global Education” in Germany.

#### Competences and ESD

Building on the DeSeCo key-competences (Definition and Selection of Competences) defined by the OECD (2002) the German programme on ESD (Transfer21) defined competence categories in the field of Sustainable development:

People should have the competencies in

- Interactive use of media and methods
- Interacting in socially heterogeneous groups
- Acting autonomously

More detailed:

#### interactive use of media and methods:

- Ability to use language, symbols and text interactively
- Ability to use knowledge and information interactively
- Ability to use technologies interactively

With a clearer focus and on the students level:

- Gather knowledge with openness to the world and integrating new perspectives
- Think and act in forward looking manner
- Acquire knowledge and act in an interdisciplinary manner

#### Interacting in socially heterogeneous groups:

- Ability to plan and act together with others
- Ability to participate in decision-making processes
- Ability to motivate others to get active

#### Acting autonomously

- Ability to reflect upon one's own principles and those of others
- Ability to plan and act autonomously
- Ability to show empathy and solidarity with disadvantaged
- Ability to motivate oneself to get active



In 1999 Germany started a joint venture between the federal government and the ministries of education developing sets of competences, teaching materials, guidelines for high quality ESD involving more than 3500 schools as pilot and test schools and in 2004 a process of developing a frame work curriculum for the learning field of global development was started.

In 2007 both developments were combined (models see in power point in appendix).

**This new perspective on Students competences has considerable consequences for teacher competences – It implies:**

- from teaching to arranging learning situations
- from complete steering everything to steering a process
- from knowing everything to helping the students ask the right questions
- assisting the students to find proper ways to answer questions
- assisting them to develop the competences for their life in the 21st century



One of the most important issues is the principle of multiple perspectives. Education at school should help students to penetrate topics and issues of sustainable development and climate change, they need to look at the issues from different perspectives

- from their own perspective
- from the perspective of different generations
- from the perspective of people in other regions, local, regional, national, global  
(see Film: <http://www.youtube.com/watch?v=RAIhZ8d5G1s>)
- from the perspective of different subjects and domains
- from the perspective of different cultural backgrounds
- from the perspective of different periods.

Moreover ESD implies new Learning Arrangements. They should be based on

- a concrete understanding of nature and environment
- the possibility of different perspectives especially a global perspective
- the concrete living situation of students
- the experiences of students
- real participation
- the possibility for students action
- integration of partners from outside school

And teachers must choose the fitting thematic areas for their ESD teaching. A table has been developed to simplify curricular planning by linking the thematic areas with the three competency domains

- "Recognition",
- "Evaluation"
- "Action"

(see graphic in the power point at the appendix)

### **3.7. Systematic development of ESD- Competencies. The Portfolio as a Tool for Working on individual and Team Competencies in Schools**



Prof. Dr. Barbara Sieber presented a competence-portfolio, designed and approved for teachers and schools by the Department of Pedagogic of the University of Applied Science of North-western Switzerland

(PH FHNW, [www.portfolio-kompetenzmanagement.ch](http://www.portfolio-kompetenzmanagement.ch)).

A competence portfolio is a tool for personal and institutional management of competencies. It allows a person to be aware of his/her personal and

professional competencies. The personal portfolio consists of a part that shows the progress of learning and a collection of relevant qualifications and certificates.

The executive manager is in charge of the management of knowledge and competencies in an institution. Managing the competencies in this context means that the head of the organization gains an overview over the actual state of competences and knows about the potential of his personnel. S/he can make use of the competencies available in the team for further development of the organization. In view of current and future tasks and challenges, s/he decides, which competencies have to be further gained or increased. S/he plans, coordinates and controls the measures for improvement or further development.

For real improvement and effectiveness in an organization, personnel and institutional management of competencies must be combined. This integrative form of managing competencies might be an effective way for concretising the work on ESD-competencies described in the CSCT- and in the KOM-BiNE-model. In the workshop the use of the tool "portfolio" for working on ESD-competencies was discussed on the basis of own experiences of the participants. The question put was: How could a portfolio of competences be used by teachers and schools and how could this instrument help to concretise and structure the work on ESD-competencies.

### Ideas for a new EU Project

The presentations of the three previous days formed the basis to discuss possibilities of applying for a new EU Project on ways of systematic further development of ESD competencies.



## 3.8 Methods for Sharing and Jointly further developing ESD Schools and Teacher Training

### 3.8.1 The World Café

The method The World Café is especially suitable discussing complex issues in large groups and developing new ideas. It is not the concrete product or result that is the most important outcome, but intensive communication in an enjoyable atmosphere – a coffee house atmosphere. The “café” tables are casually arranged in the room, with chairs for about 4 to 6 persons per table. The tables are covered with paper and coloured markers are lying on top to invite people to write (and draw) their ideas on the “table cloth”, the paper. Every table has another theme written well visible in the centre. It is nice to offer also coffee and other drinks at the tables.

At the beginning of the World Café one person is asked to host each table. The task of the host is to welcome the new guests at his/her table and to inform them about the topics and questions of the previous round. They do not leave their table. The others walk around and decide on one topic they would like to discuss and everybody sits down at the respective table. They form the discussion groups for the first round. During the discussions the hosts encourage the guests to write and draw across the paper on the table just as they like with the idea being to create a picture of variety. After about 20 to 30 minutes the participants are asked to round up their talk and to change tables, so that there are built totally new mixtures of discussants at new tables. Just the host remains and welcomes the new persons. Usually there are three swaps. At the end the hosts report the discussions of their tables (more than 2 to 5 minutes each) and the colourful “table cloths” are hung up on the walls. This method allows the ideas of the participants to be linked. By changing discussion partners everybody gets new inputs and the products of the previous discussion are advanced and enlarged.

(A detailed description is to be found on: [www.theworldcafe.com/articles/cafetogo.pdf](http://www.theworldcafe.com/articles/cafetogo.pdf))



In Innsbruck the themes for the World Cafe were not predefined, but the participants decided themselves via brainstorming, clustering the ideas and voting through giving points: each participant got three points to allocate to their favourite ideas. The four topics which were given the most points were then chosen as the themes of the four tables and were written on the papers on the table.

The four selected topics were:

- Promotion and ownership in / and lifelong learning
- ESD in Teacher Education
- ESD in practice
- How to motivate pupils and colleagues

(See the posters in the appendix)



In this case the hosts were not selected for the whole period of the World Cafe but stayed only once and had the chance to change table after the second round. The person who hosted a table for the second and third round was then the reporter of the outcomes of this table.

### 3.8.2. The Future Workshop

In the 1970's the method was developed by Robert Jungk and Norbert R. Müllert as a tool in the political fight of civil groups to better enforce their interests to create a future worth living for. It enables a group of people to develop new ideas or solutions of social problems or conflicts. It is a well structured method, fosters self-organisation, awareness, fantasy and action competence, but it requires good preparation and support by trained moderators.

## **Phases of the Future Workshop**

### **Preparation phase**

The methods, rules and the scheduled course of the workshop (in accordance with the participants) are introduced. Preparing the room together with the participants and to look for enough space to move around is a further suggestion.

### **Critique phase**

The problem is investigated critically and thoroughly. First of all, a visualised brainstorming is performed. The participants write the critical points on moderation cards, pin them on a board and together cluster and title them. As a result a general and critical question concerning the problem is framed.

### **Fantasy phase**

After dealing with the problem, the future workshop does not immediately search for the solution. First all participants try to work out a vision, to draw an exaggerated picture of future possibilities. For this exiting and playful activity a relaxed atmosphere should be provided (regarding the room and by playing ice-breaking games). As a first step to build upon, the previous critique cards can be converted into their opposite (i.e. instead of “our politicians never pay attention to our opinions”: “In every community project the mayor is asking for our comments”...). The group divides into smaller groups who develop unusual, utopian solutions. It is important that in this phase all ideas are welcome, regardless of their practicability. They all are collected in an “idea storage”. The ideas are presented to the others in a creative way, like paintings, role play, sketch, collage, etc. This helps to think “out of the box”.

### **Implementation phase**

The ideas found are checked and evaluated with regard to their practicability. If solutions are found, they are finally written down and an action plan is prepared (who does what, when, where and how).

### **Permanent workshop**

This is the realisation phase of the solution concepts. Most frequently the first 4 phases of the Future workshop take place over a weekend (every phase half a day), in some cases each phase may be run through within one hour.

For more detailed information see: [www.die-bonn.de/espid/dokumente/doc-2004/apel04\\_02.pdf](http://www.die-bonn.de/espid/dokumente/doc-2004/apel04_02.pdf) or: Jungk, R./Müllert, N. (1987) Future workshops: How to create desirable futures London: Institute for Social Inventions.

In Innsbruck the topic of the Future Workshop was: **“My institution as an ESD institution in the year 2025”**

In the first phase - the critique phase – the participants visualised their institutions and wrote down on moderation cards what would hinder them from turning their institution into an ESD institution. We collected and clustered them. Then the participants wrote their names on small cards and pinned them to one of the clusters. After some shifts three topics were selected. Too



many people had pinned their names to one topic, so this group formed two subgroups on two slightly different topics.



- schools to foster ESD
- Developing ESD competences for teachers institutions
- Teacher education for ESD

In the second phase – the vision phase – the participants divided into their smaller groups, took the cards concerning their selected topics and reformulated them as their opposite. The result were cards with positive perspectives.



The cards formed the basis on which the participants created a positive vision on their topic. One group prepared a performed story, two groups showed a short theatre and one group explained a painted poster on their visions.



In the third phase each group selected one part of their visions and tried to find ways to realize it. The resulting posters were presented for the whole group.

At the end of this activity there was a very optimistic and positive atmosphere in the group.



### **Final Evening**

On the final evening participants and seminar leaders enjoyed a farewell dinner together. The dinner was important as a type of celebration of the week spent together working on ESD. Practice in Europe and as a leave-taking. However, there was one last particular thematic issue: the dinner took place in a restaurant situated at some 7,000 feet in an incredible mountain landscape, which serves the local population as an area to relax and recuperate from the stress of everyday life in the city and which is also utilised as a so-called "fun park" for extreme sports. Participants left the Tyrol with an impression of horizons.



## 4. Evaluation

### 4.1. Evaluation Methods

#### Interim Evaluation

On Tuesday evening an intermediate evaluation was carried out:

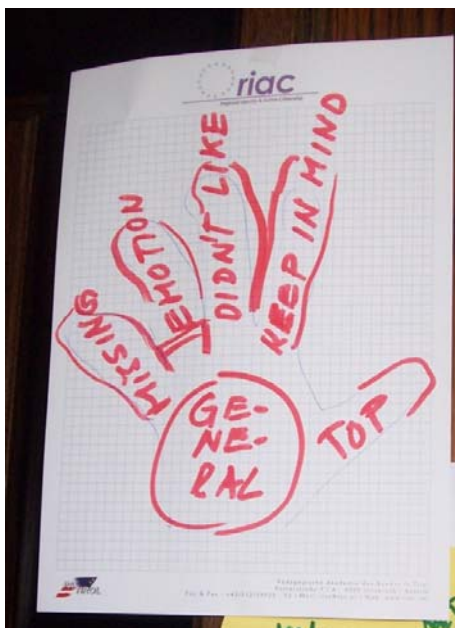
Every participant wrote two cards:

- What was the best experience I had in this course so far, what was exciting for me? (*Highlights*)
- What has to happen still to make me satisfied with this course? (*Hopes*)

The cards were collected and a summary was given to the participants the following day. The programme was slightly adapted to best fulfil the expectations. (Transcript of midterm evaluation: see Appendix)

**Evaluation at the end of the course** (for description of the methods see appendix)

**Fingers of the hand** (all results: see appendix)



**Reflection through proximity and distance**



**Evaluation sheet (5 pages)** (detailed results of the evaluation: see appendix)

### 4.2 Overview of evaluation results

The TT Seminar was attended by 21 participants from all over Europe and 5 experts / organisers. (see list of participants in the appendix). All non-Austrian participants submitted the evaluation sheets. 16 of them women, 1 man. 9 of them were teachers, 6 teacher trainers, 1 was a NGO-employee and 1 had another profession.



The participants appreciated the good preparation of the seminar *"thank you for such great organisation. Everything was on time and we had a very nice atmosphere for working"*. A lot of participants wrote they liked the friendly atmosphere; they were touched by the *"good positive dynamic in the group"*. They accounted that to the *"lovely people"* and *"a lot of team-building exercises that united the group from the beginning"* which helped in an unconventional way getting to know each other. Some of them had never experienced ice-breaking activities and considered them *"surprising"* and funny. Finding people with *"the same way of thinking"* and the feeling *"I'm not alone"* in the field of promoting ESD were some of the most prominent personal benefits at the end of the seminar as well as *"developing intercultural and linguistic competence"*.

Regarding content the most frequent statements were: improvement of knowledge, (new) ways of teaching ESD and especially: work with the Quality Criteria for ESD, which highly motivated the participants. Concerning the locations and the ambience: The seminar participants liked the surrounding of the Tyrol, especially Aldrans: A really great atmosphere fostering ESD and getting through the tough 5 day's programme. For some participants the programme was a bit too intensive, they mentioned *"getting up early – I hate"*, *"little options for doing something private"* or were missing *"leisure"*.

The variety of methods during the seminar and the output as a result of the methods were mentioned very positive, especially new methods like the World café (*"very good"*, *"nice method"*, *"extremely good discussions"*) and the Future Workshop (*"Excellent interactive method"*, *"very much fun"*, *"will use the method in class"*, *"way to think forward and to cooperate"*).

The seminar fulfilled the expectations in every respect (10) or in nearly all points (7), because of *"new ideas/methods"*, *"the balance between theory and practice"*, *"the organisation and the climate in the group"* and the *"sharing of experiences"*.

Most of the group members loved the school visits as *"best way of understanding the quality criteria"* and the excursion *"Two valleys"*. The majority of the feedback showed great satisfaction with the performance of the lecturers (relevance of content and presentation).

The "Fingers on the Hand" evaluation tool and the open questions in the evaluation sheet indicated what some participants missed regarding the content: *"an overview of ESD approaches/theories"* or *"more case studies"*. The participants were highly motivated to share and to contribute. Therefore some participants hoped to get more possibility to present their work in front of the group. During the planning phase we had decided to avoid a series of presentations and instead provide ways in which participants could exchange experiences interactively. Thus, the participants received an e-mail in advance that there would be space for communication, but there would not be an exclusive session for project/country presentations, not all of them read this information. Ideas to avoid such disappointment without going back to tiring sessions could be: (1) communicate such things in a better way, (2) offer perhaps a poster presentation on the first evening or (3) the possibility to upload presentations on the project documentation or website.



## 4. Conclusions

The long tradition of ENSI (network Environment and School Initiatives) and the related EU projects SEED and SUPPORT as well as other initiatives for further developing ESD (PFL courses and the BINE – course for ESD in teacher education of the University of Klagenfurt and the FORUM Umweltbildung, etc.) and a series of national workshops on Q.C. through ENSI Austria were a perfect background for the seminar and contributed a lot to content and methods.

To be able to work in ESD it is important to have the possibility to meet motivated colleagues (have the feeling “*I’m not alone*”), to try out and experience methods personally to be confident to use them in the own work and to discuss contents and frame-conditions for ESD to be empowered and keep being motivated. The positive feedback to the workshop on the Quality Criteria for ESD Schools including the school visits, as well as to the World Café and the Future Workshop back up this opinion. One of the most interesting result of the seminar was getting to know the different ways of ESD approaches of the different countries and cultures.

The group was excellent and motivated from the beginning and all of them were eager to contribute and exchange. Two aspects showed the interest of participants in further developing ESD in their work: (1) Some participants sent e-mails after the course and told the seminar leaders that they already implemented methods and contents of the seminar. (2) The majority of participants took part in the planning session for a new EU application, which was an optional part of the seminar. Some are even planning to participate in the upcoming preparatory visit. Thus we assume that the seminar will have a lasting effect on the participants’ teaching and teacher training. We hope that – using the words of one of the participants – the seminar is a sustainable “vitamin injection” for ESD. A Documentation with all presentations, methods and photos will be available by the end of November on [www.umweltbildung.at/support](http://www.umweltbildung.at/support).

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## 1. Programme

<b>Sunday, 19.9.2010</b>		
<b>From 19.30</b>	<b>Opening of Seminar Evening Meal and Informal Introductions</b>	Aldranser Hof
<b>Monday, 20.9.2010</b>		
<b>8.45</b>	<b>Departure from Hotel (by Tram)</b>	
<b>9.20</b>	<b>Official opening of Seminar &amp; Words of Welcome Breaking the Ice Overview of the Programme</b>	Pedagogical University PHT Room 201
<b>11.00-11.30</b>	<b>Coffee Break</b>	
	<b>Lecture: Quality Criteria for ESD Schools: <i>Christine Lechner</i></b>	
	<b>Workshop on Quality Criteria for ESD Schools</b>	
<b>13.00-14.30</b>	<b>Lunch at the Practice Primary School Informal Discussions with Head and Teachers Presentation of whole-school ÖKOLOG Day: <i>Waltraud Egger</i></b>	Practice Primary School
<b>14.30-18.00</b>	<b>Workshop on Quality Criteria for ESD Schools (continued)</b>	Room 201
<b>19.00</b>	<b>Coffee Break at Biotope in the Practice Lower Secondary School</b>	Practice Lower Secondary School
	<b>Lecture: Teacher Competences for ESD – CSCT and KOM-BiNE: <i>Regina Steiner</i></b>	Room 201
	<b>Evening Meal</b>	Aldranser Hof
<b>Tuesday, 21.9.2010</b>		Johannes-Messner-Schule Schwaz <a href="http://www.vs-johannes-messner.tsn.at">http://www.vs-johannes-messner.tsn.at</a>
<b>7.15</b>	<b>Departure from Hotel (by Coach)</b>	
	<b>Quality Criteria for ESD School: School Visit in two Groups</b> <ul style="list-style-type: none"> <li>• Primary School</li> <li>• Upper Secondary School</li> </ul>	PORG Volders <a href="http://www.porg-volders.tsn.at">http://www.porg-volders.tsn.at</a>
<b>13.00</b>	<b>Lunch</b>	Restaurant in Lower Inn Valley
<b>15.00</b>	<b>Discussions on Morning Experiences at Schools - prepare Feedback for schools</b>	Aldranser Hof
<b>19.30</b>	<b>Evening Meal City Walk &amp; Talk with Historian</b>	Weinhaus Happ, Old City

<b>Wednesday 22.9.2010</b>		
<b>8.30</b>	<b>Departure (by Coach)</b> <b>Excursion: Sustainability? Two Valleys give an answer</b> <b>Hans Hofer, Biologist</b> <b>Franz Riegler, Geographer</b>	The Tyrolean Alps
<b>13.00</b>	<b>Lunch</b>	
<b>14.30</b>	<b>Public Lectures:</b> <b>Teacher Competences for ESD to foster SD</b> <b>Competences of Pupils – The Models “Gestaltungskompetenz” and the “Competency Model of Global Education” in Germany: Reiner Mathar</b>  <b>Systematic development of ESD- Competencies. The Portfolio as a tool for working on individual and team competencies in schools: Barbara Sieber</b>	PHT Room 102
<b>16:30</b>	<b>Workshop: Barbara Sieber</b>	
<b>19.00</b>	<b>Evening Meal</b>	
		Riese Haymon, Wilten
<b>Thursday, 23.9.2010</b>		
<b>9.00 – 13.00</b>	<b>World Café – Exchange of Participants’ Experiences</b>	Aldranser Hof
<b>13.00</b>	<b>Lunch</b> <ul style="list-style-type: none"> <li>• Afternoon for Individual Activities</li> <li>• COMENIUS Project Planning</li> </ul> <b>Evening Meal at Hotel or in City</b>	Aldranser Hof
<b>Friday, 24.9.2010</b>		
<b>All day with breaks as appropriate</b>	<b>Future Workshop: Regina Steiner</b>	Aldranser Hof
	<b>Lunch</b>	
<b>17.30</b>	<b>Departure for Seegrube</b> <b>Evening Meal on the Top of the World!</b>	Aldranser Hof
<b>Saturday, 25.9.2010</b>		
	<b>Individual Departure</b>	

## 2. Participants EU Seminar: Teacher Competences for Education for Sustainable Development

First Name	Surname	Organisation	Place	Country
Deniz	Ates	Elementary Education Department at Middle East Technical University (METU)	Ankara	Turkey
Mihaela	Bazarciuc		Bucharest	Romania
Marc	Bloch	Institute for international Cooperation in Education (IZB)	Zug	Switzerland
Tildyné Ruh	Borbála	Külvárosi Tankör	Budapest	Hungary
Bernarda	Božnar	Biotechnical Centre Naklo - Secondary School	Naklo	Slovenia
Gudrun	Danter	FORUM Umweltbildung	Salzburg	Austria
Andrea	Gandler	PH Tirol	Innsbruck	Austria
Hans	Hofer	PH Tirol	Innsbruck	Austria
Kirsti Marie	Jegstad	Norwegian University of Life Sciences	As	Norway
Randi	Johannessen	Flaktveitskole	Flaktveit/Bergen	Norway
Mercè	Junyent Pubill	Facultat de Ciències de l'Educació, Universitat Autònoma de Barcelona	Cerdanyola del Vallès	Spain
Christine	Lechner	PH Tirol	Innsbruck	Austria
Reiner	Mathar	Servicestelle Schule & Gesundheit Hessen		Germany
Teresa Miranda	Maureira	Lundellska skolan	Uppsala	Sweden
Mirela	Mazilu			Rumania
Claudia	Meierhans	IZB PHZ Zug	Zug	Switzerland
Kajsa	Nerdal	Lundellska skolan	Uppsala	Sweden
Monika	Raffelsberger	PH Tirol	Innsbruck	Austria
Franz	Riegler	PH Tirol	Innsbruck	Austria
Barbara	Sieber	Fachhochschule Nordwestschweiz Pädagogische Hochschule, Institut Weiterbildung und Beratung	Aarau	Switzerland
Maria	Skliri	17 gymnasium of Patras	Patras	Greece
Regina	Steiner	FORUM Umweltbildung	Salzburg	Austria
Maria	Toth	Healthy Environment Regional Organisation "HERO"	Cluj-Napoca	Romania
Ingrid	Vander Linden	OVSG vzw	De Pinte	Belgium
Meta	Vovk	Biotechnical Centre Naklo - Secondary School	Naklo	Slovenia
Evangelia	Zouni	11TH Primary School of Lamia	Lamia	Greece



### **3. Ice-breaking activities and getting to know each other**

Here is the description of the methods we used to come into a first contact with each other and begin to feel as a group:

#### **3.1 “Sich Vorstellen”**

A short German language lesson initiated the slightly different introduction round: The expression “sich vorstellen” means on the one hand: to introduce oneself, on the other hand it can also mean: to imagine something. The proposal was to do the introduction the other way round as normally: Two participants of the same country stood up, told their names and country and the others tried to imagine their personality, their hobbies, their way of living, etc. and guessed like in a brainstorm session. The two participants in the centre could then agree upon or correct the assumptions of the others. Thus it was also a way to get aware of cultural differences and prejudices and to smile upon them.

#### **3.2. Names and Movement**

Participants stood in a circle. One person began: said his/her name and performed one movement with hand, foot, head or the whole body... then all participants together repeated the name and the movement (at the same time). Then the person standing next to the first one said his/her name and made another movement. Again all together repeated the first name (with movement) and the second name (with movement). Then it was the turn of the third person. At the end the replication was already quite long and a challenge for all repeating all the names together with all the movements. To use the right and the left hemisphere of the brain should help to remember names and persons more easily and it was fun!



#### **3.3. Where do you come from**

We put a vase of flowers (it could also be a chair,...) in the middle of the room: Here is Innsbruck! Please find a place in the room in the direction of where you come from. People placed themselves to the north, the west,... of the vase and nearer or further away according to the area they come from. Christine from Zürich, Switzerland would then stand west of the vase but rather near, while Teresa from Sweden would stand rather far north from the vase. The participants

discussed and chatted while they tried to find their adequate position. We got a quick overview where the majority of the participants were coming from.

### **3.4. Corner Discussions**

Participants were asked to go to one of the corners of the room. One corner was named “School”, the other “Teacher Training”, the third one “others”, concerning their areas of working. They discussed between them what they are dealing with at work and why they came here to the seminar.

### **3.5. Stand in a Line**

We marked an imagined line between door and window. Along that line persons positioned themselves according to the question “How long have you already been working in ESD?” – At the extreme one end of the line it would mean: 0 years, in the extreme other end of the line: 25 years or more. While positioning people asked each other “how long have you been working?” but also discussed “What would you mean by ESD? I have been working in Environmental Education – would you think this ESD?” and so on...

### **3.6. Quick Quiz**

Every participant got a piece of paper and a pencil. There were 5 statements written on in, like “I am able to say good morning in at least 5 different languages”. Walking around in the room the participants should try to find at least one person for each of the five statements, who agreed and let him/her sign in the empty field beside the statement.

This is another way to get to know names and to perhaps get also in a quick discussion on some of the topics of the conference.



## 4. Handout for Excursion “Sustainability? Two Valleys provide the Answers”

### *Sustainability?*

#### *Two Valleys provide the Answers*

#### *An Excursion to the Stubai and Gschnitz Valley*

*Hans Hofer & Franz Riegler*

#### *Programme*

08:00	<i>Departure from Aldranser Hof</i>
08:15	<i>Glimpse of the Stubai Valley: the Nature of the Valley</i>
09:00	<i>Sustainable Iron Industry in Fulpmes?</i>
10:15	<i>Agriculture in the Neustift area – Sustainability?</i>
10:30	<i>Limits &amp; Sustainability of Mass Tourism (Mutterbergalm)</i>
11:30	<i>Gschnitz Valley: Moraine, Trins</i>
12:00	<i>Gschnitz, Valley: Soft Tourism and Sustainability?</i>
	<i>Lunch at the “Flintstone”</i>
13:15	<i>Departure</i>
14:30	<i>Public Lecture at the PHT</i>



Panorama Map: Innsbruck, Wipp Valley, Gschnitz Valley and Stubai Valley

### **a. Stubai Valley**

**Natural Phenomena.:** The Stubai Valley lies to the east of the Ötz Valley Massive and cuts through the layers of rock, which run from North West to South West and are filled with large crushed stone. The rocks have eroded from Fulpmes to the **Ruez** to the extent that they form two terraces separated by a gorge. The northern terrace leads directly into the central mountain range of the Inn Valley. From Fulpmes the two valleys come together and form the valley floor.

The Gravel Terraces were probably deposited during the Final Ice Age. Remains of the moraine from the final thrust forward, which was as its most expansive 18,000 years ago, overlie the

terrace. The end of the Ice Age is marked by several small thrusts and the evidence of this movement is the numerous moraines.

The under layers of rock consist of hornblende and phyllite with inlays of granite, gneiss and amphibolite. The Mesozoic Stubai Limestone Alps stand on the silicate base, which declines towards the east. The Alps form the Serles Ridge to the South and the rounded limestone mountains to the North. At both valley ends we find two pyramid-shaped mountain peaks marking the entrance to the valley like great gates. The Saile (Nockspitze) in the North and the Serles in the South (there is a legend about the cruel King Serles).

There is a great variety of flora at the point where the silicate and carbonate meet.

**Economy:** Both limestone mountain chains consist of dolomite rock, which has kept its original position in a slightly different form. Underneath lie quartz conglomerates in which magnetite and siderite occur. These were mined in the Limestone Alps and were the basis for the development of the **Stubai Iron Industry**. Numerous small forgeries developed originally working with charcoal produced in the valley until 1890 and later importing coal and finally changing to gas. The ore mining finished after WWII and thus all raw materials are now imported. The strengths of the Stubai Iron Industry are still the production of high-quality tools, knives, equipment for mountain sports and engine parts for the motor industry.

The oldest economic basis for the inhabitants of the valley was **Agriculture**. Agriculture has been the sustenance of the people in the valley for the past 7,000 years and the working methods have only changed slightly over this time. Until 1946 the farmers produced everything that they needed to live: milk, corn, vegetables, poppy seeds, potatoes, some meat, sheep's wool and even flax, which they made into clothes. Between 1946 and 1960 most of them stopped production of corn and arable and changed to milk or meat production or gave up farming completely.

The cause of this dramatic change was **Tourism**. The Stubai Valley was well known amongst mountaineers in the 19<sup>th</sup> Century as its peaks can be seen from the Inn Valley and also because it was served by a railway. Tourism flourished after the WWI, but many newly built hotels were driven into ruin by the ban on importing more than 1,000 Marks. From the 1950's guests started to return for "Sommerfrische" or Summer Retreat. The farmers and craftsmen slowly started to invest in this area and saw a chance to improve their meagre income through tourism. More and more guests filled the hotels and the modest bed and breakfast accommodation of the valley during June, July and August. The visitors normally stayed for two to four weeks and relaxed walking and climbing in the mountains. Many of them began to feel at home getting to know the families and even helping with the harvests. The quality of this kind of summer retreat was such that many returned year after year and brought friends and relations and soon there were more people looking for relaxation and peace in the valley than the valley could hold. This kind of Summer Tourism peaked between 1960 and 1970 and the hotels were completely full during the season.

**Escalation.** The first large hotels were built at this time in order to meet demands. However, in order to pay back the bank loans the hotels needed a tourist season lasting longer than three months and they were the driving-force behind the development of Winter Tourism. And so the first small drag-lifts were built and lavishly advertised. The guests flooded in during Winter as well and demanded new hotels and the new hotels demanded newer and larger skiing areas. Thus the first ski lifts above the tree-lines were constructed and ski runs were ploughed through the trees. Around 1970, for the first time more income was made from tourism during the Winter than during the Summer. In 1972 the first part of the Glacier Lift was built and with the construction came the possibility of a twelve-month season, which in turn kicked off a new boom of new hotels and to further extension of the skiing area on the glaciers. While the people in the valley started to talk about the limits of this development, five more glaciers had been included into the skiing area. Up to 10,000 tourists a day ski on the glaciers all year round and the pistes are prepared by



very noisy machines. People really looking for peace and relaxation avoid the area – as do animals.

**Effects.** Tourism has completely changed the valley. The number of buildings has multiplied; the agricultural area has decreased and is now only cultivated as hay meadows. Mountain pastures are fewer, the wooded areas have increased and there are more cars than ever. Up to 8,000 cars pass through the valley in the morning and in the evening on the way to the glacier lifts and the levels of air-pollution through nitrous gases, soot and fine dust or particulates from exhaust and heating systems is as high as in the cities. Since the developments also led to the need for labour, many more people moved into the valley and the population doubled between 1950 and 2000.

**Agricultural** reached its zenith during the Late Middle Ages. Woods were cleared for firewood and pastures, mountain pastures were laid out, the valley floors overgrazed and the borders of the pastures guarded closely. In spite of this, not all the people could be fed and so some had to migrate into the towns.

**Iron Industry.** In the Stubai Valley it was possible to earn a living as a miner or iron-smith as well as an artisan. However, there were limits to this form of industry as the iron reserves at the foot of the limestone mountains soon threatened to become exhausted and people were worried that this form of industry would die. However, new sources of raw materials were discovered: scrap iron and mineral ore from the furnaces in the foothills of the Alps. The smithy industry had become refined enough to make it worthwhile importing raw materials and the charcoal for heating the iron could be obtained from the woods and gave work and bread to the charcoal burners. When this resource threatened to dry up around 1800, once more people feared the end of the production of tools. However, the change to coal and later gas was successful.

The limits for **Summer tourism** were first felt when the figures began to sink instead of rise for the first time. The valley had lost its original beauty and many of the guests began to choose quieter valleys. But something else had changed as well: travelling had become simpler and cheaper and many of the potential summer guests travelled to the sunny beaches of the Mediterranean or to countries outside Europe by car or aeroplane. Old style Summer tourists are decreasing and yet tourism is still one of the most important sources of income. Apart from skiing, other attractions are offered: sports events, guided walks, health packages. But there are other forms of limitations:

- The capacity of the landscape has been reached. Alpine Eco-Systems are sensitive. Too many paths and ski pistes destroy the turf and leads to erosion.
- Building areas are a limited resource in the Alpine Valleys.
- Building new areas for tourism, especially ski tourism is limited through the establishment of protected areas. The protected areas are being established for plants and animals, but also for individuals and groups who are in search of peace and relaxation.
- The more tourists that come, the higher the density of people and cars. This leads to increased aggression. People no longer feel comfortable and withdraw.
- The quality of relaxation and recuperation. The density stress lowers the quality of relaxation and recuperation.
- Climate warming. Though climate warming the Alpine permafrost soil is thawing and causing rock falls. High mountain areas are becoming more dangerous and some mountain paths have had to be closed.
- Lack of snow and the melting of the glaciers are the largest threat for ski tourism!

## **b. The Gschnitz Valley**

**Natural Phenomena.** The valley running parallel to the Stubai Valley is the Gschnitz Valley. The Valleys are separated from each other by the 2,700 high Serles Ridge, which forms powerful escarpments on the North side of the Gschnitz Valley. Towards the Wipp Valley the rocks were rounded at the time of the Ice Age - the Waldrast "Jochl" (small ridge) and the Blaser Mountain. In the valley there are two villages, which are called Trins and Gschnitz.

The escarpments near the village of Trins made of dolomite and reef, which were sunk into the earth's crust and heated to a heat of 500°. Crystalline marbles were formed from the limestone and dolomites and crystallised micaceous from the clay. These stones contain ore (e.g. iron, lead, zinc and copper), which has been mined for centuries. These are overlaid by the only Jurassic sediments in the area. The reef limestone and the deep-sea sediment (240 to 130 million years old) form the foundations of the rest of the Serles Ridge. It is the remains of the northern Limestone Alps in the South, which were pushed over the Stubai Alps with the formation of the Also and are now much further to the North.

The Southern border of the valley is formed by the softly rounded mountains of the "Steinacher Decke". This consists of the Palaeozoic stone, which was also shifted here from the South and is between 450 and 300 million years old. A part of this stone comes from the Carbon Age: sandstone and conglomerates in which petrified ferns, horsetails and club moss can be found. The most beautiful examples can be found in the mine dump of an old coal mine (anthracite) near the Nösslach Mountain Restaurant (an evangelical Youth Hostel.)

Beyond, the mighty towers of the Tribulaune rise up and the end of the valley is similar to the end of the Stubai Valley. It is formed by glaciated flint stone, which consists of phyllite as the other Stubai Alps.

**Traces of the Ice Age.** If we look west from Trins, we see an enormous bank which blocks off the end of the valley and can be followed some kilometres into the valley. It consists of blocks, which are the size of houses and were transported up to 15 kilometres by the glacier ice. This remarkable moraine bank impresses us in its perfect preservation and is to be found in international scientific literature as a late Ice Age typical locality, as the Gschnitz Stadium. This glacier movement took place at the end of the last Ice Age, approximately 13,500 years ago.

As the Gschnitz glacier retreated, the remains of the ice remain in the moraine material and slowly melted. Funnel-formed holes remained, known as the "Toteislöcher". The best-known Toteisloch in the Trins moraine is the so-called "Krotenweiher", which is filled with an enormous swamp. The oldest deposits in the swamp (remains of plants and pollen) have a 14C-Age of ca. 9.600 years.

### **Economy**

**Soft Tourism.** The dialect and the farming culture of both valleys are very similar. However, the economy in the Gschnitz Valley developed in a completely different way. Whilst the Stubai Valley was known to all, the Gschnitz Valley became an insiders' tip for naturalists and people seeking peace and seclusion. Thus the Gschnitz Valley developed a quiet form of Summer and Winter tourism (fewer tourists, no mass tourism, fewer and smaller hotels). As there is no industry, many of the valley inhabitants commute to work.

### c. Characteristics of Sustainable Development

By sustainability we understand the attempt to use the human and natural **resources** in a particular area in such a way that future generations will be able to live and work there as well. The harsh mountain landscape and climate in the Alpine Valley have always shown man the limits. If people make a mistake, nature answers immediately. Felled forests cause avalanches and floods and overgrazing reduces yield. Thus, the farmers were forced to live in a sustainable way and they knew that the generations who followed them would also have to live from what the farm could yield. And so, in general, they farmed in such a way that they could pass on the land to the next generation in a healthy state.

The miners were different. When they discovered a vein of ore they mined until it was exhausted. Sustainable management was not possible as nature could never renew at the speed that the ore was mined. The only way out of the situation was **Recycling**: when the veins had been exhausted, the former miners began to collect scrap metal and sell this to forgeries. Although cheap raw iron was imported from other areas, in the Stubai Valley the scrap iron trade continued to exist. Knowledge of the business became useful much later when the mountains of rubbish began to grow and the recycling laws were passed. Former scrap-metal traders took on the tasks of collecting and processing all sorts of rubbish. Recycling is a characteristic of sustainability.

**Education.** Forgeries proved to be quite as sustainable as agriculture despite problems with natural resources. They passed on their knowledge from one generation to another and built a school for iron processing, which later became a branch of the Technical School. Thus, the skills and knowledge of the smiths was further developed and the creativity fostered. Here we have Skills, Knowledge and Creativity as a characteristic of sustainability. These are fostered, in turn, by professional education institutions.

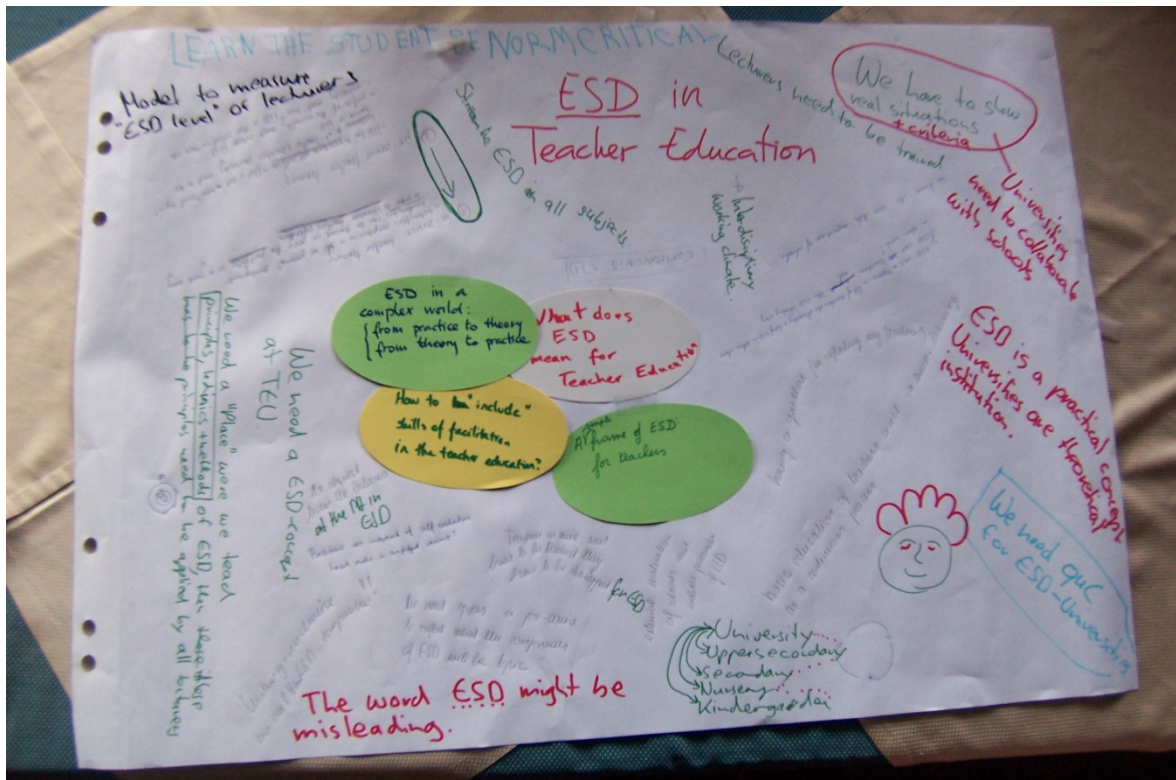
**Political Stability and Social Balance.** Tourism is the youngest form of economy in the valley: as history shows, tourism is a particularly sensitive area. The spiteful action of a tyrant can lead to destruction and natural catastrophes can be seen in this light – as the Tsunami in South East Asia. Tourism is built on several resources: landscape and climate, infrastructures, political stability, creativity and the knowledge of man. Thus, the protection of the climate, the gentle exploitation of landscapes, a social balance at a global level, the careful upgrading of infrastructures and the continuing professional development of the whole population are measures, which farsighted proponents of the tourist industry support.

## 5. Posters from World Cafe

### 1. Promotion and ownership in/and life long learning

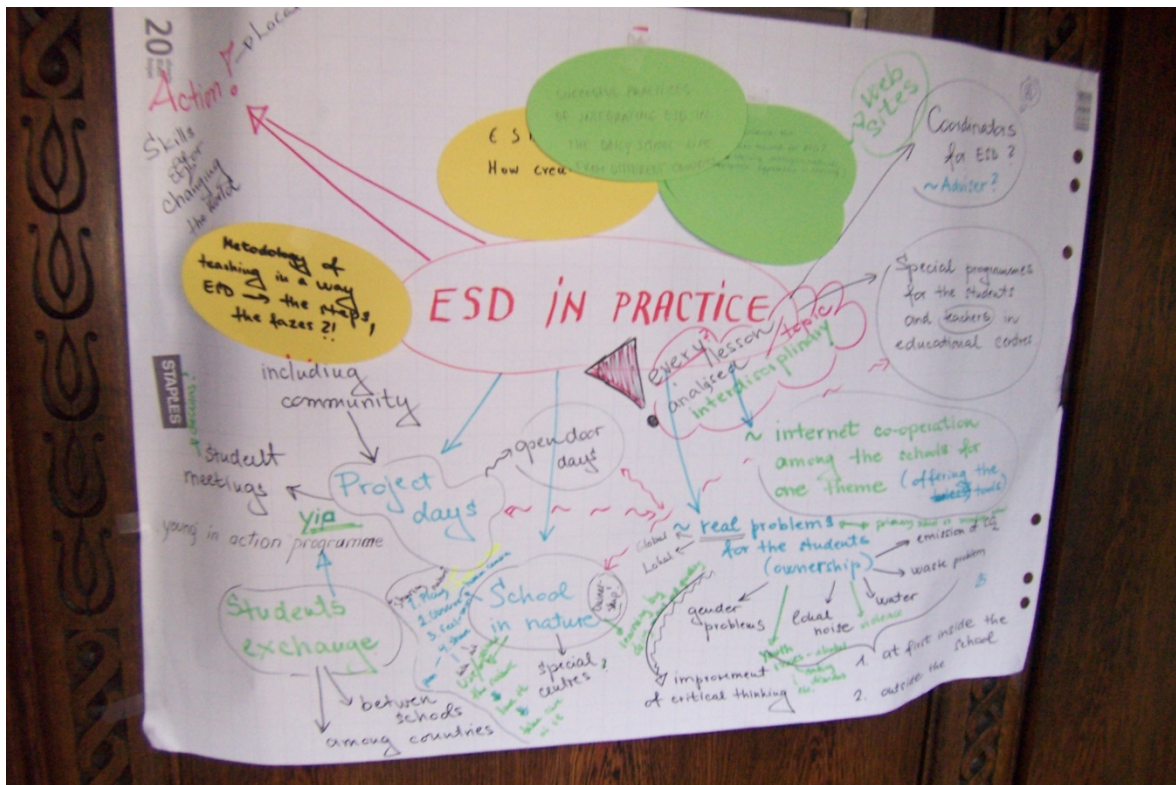


### 2. ESD in Teacher Education





### 3. ESD in practice



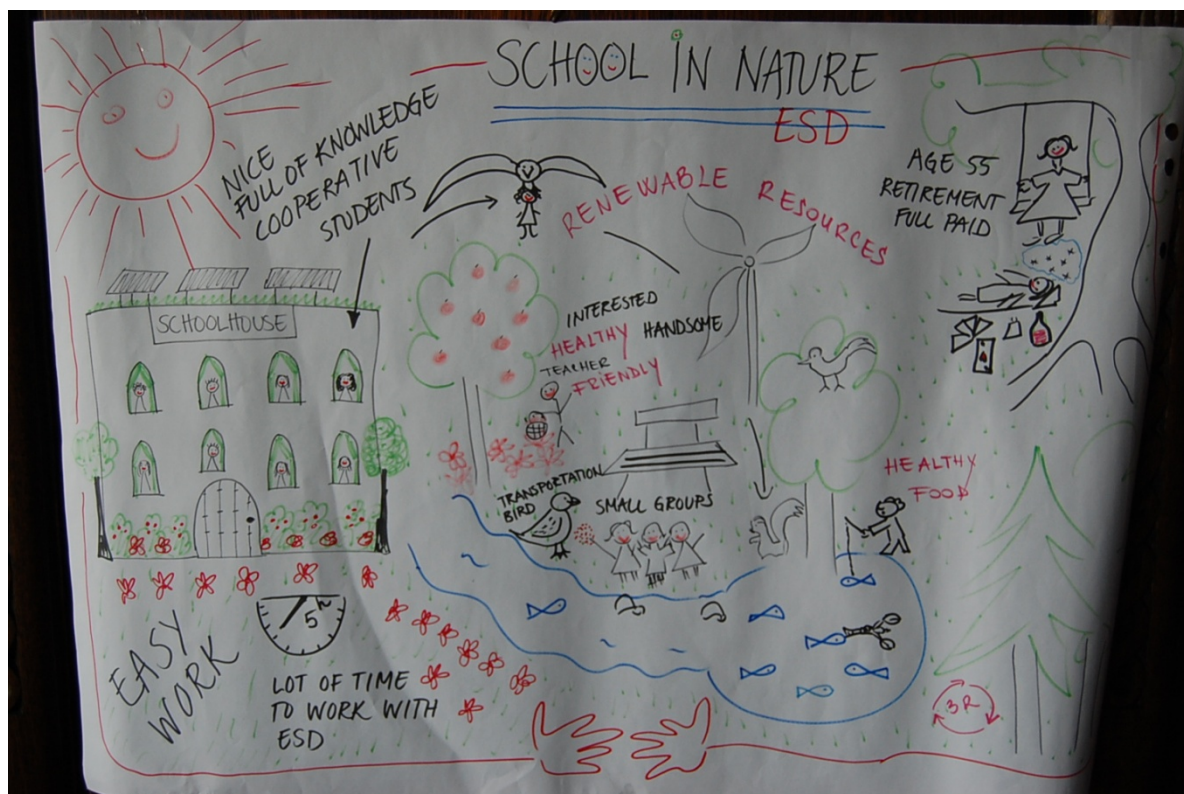
### 4. How to motivate pupils and colleagues



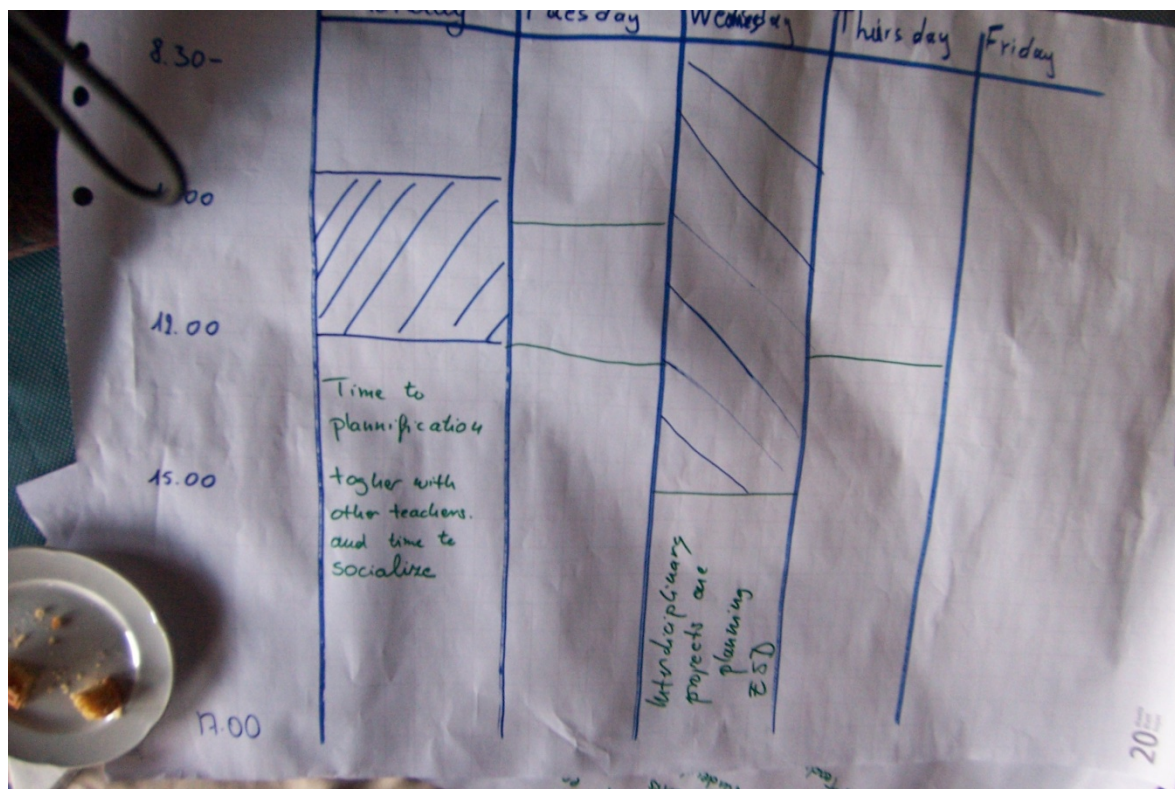


## 6. Posters from Future Workshop

### Visions: Group 1



### Visions: group 2

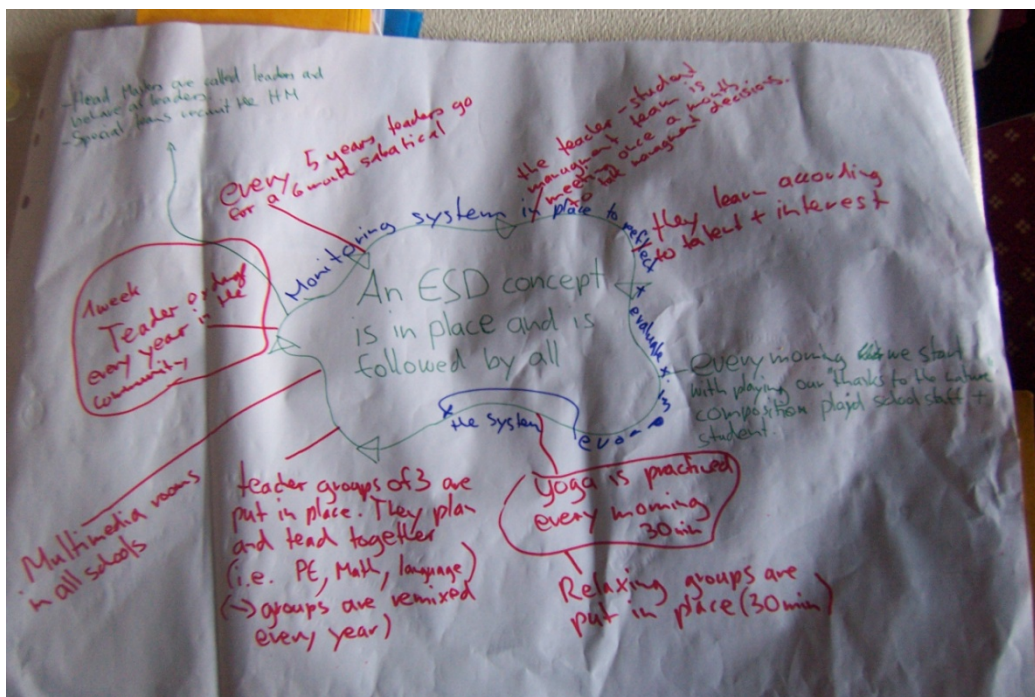




### Visions: group 3: - story and theatre

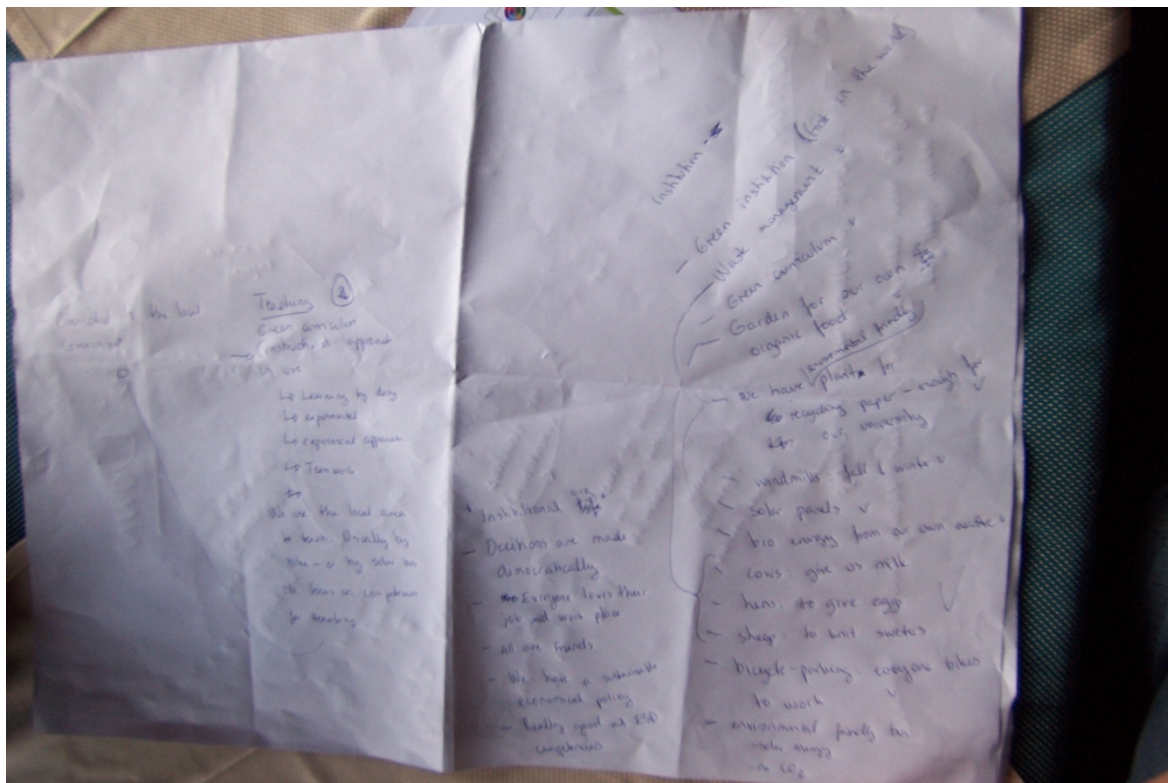


### Visions: group 4

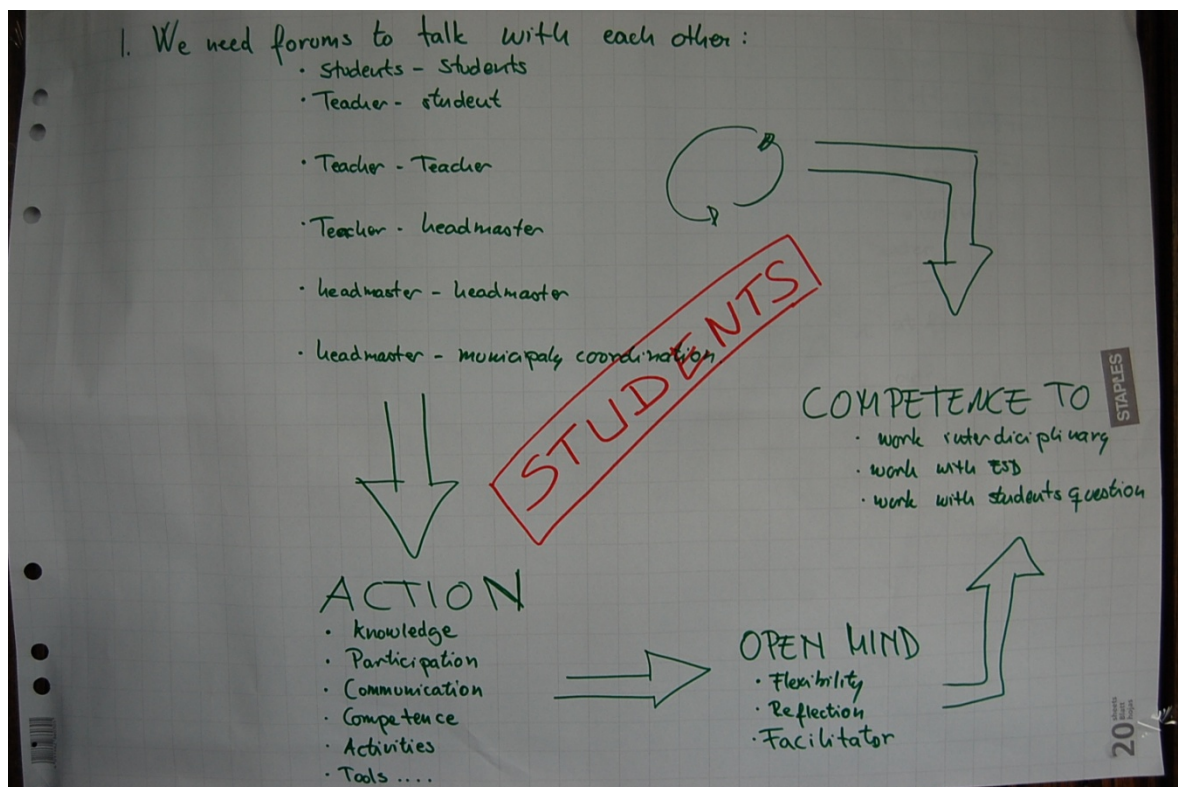




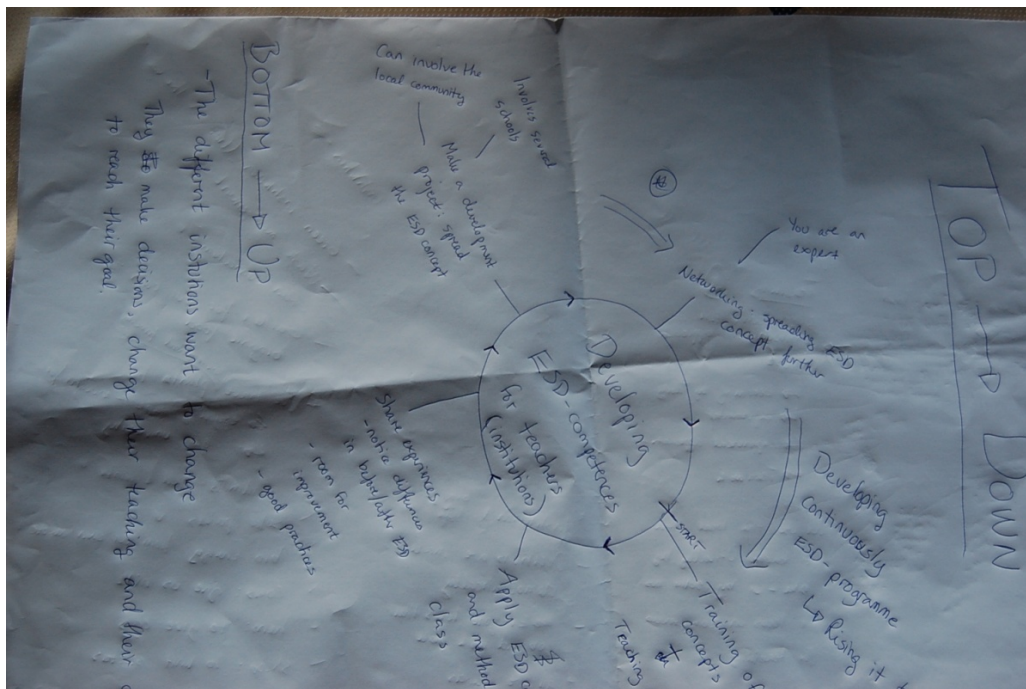
## Realisations: Group 1



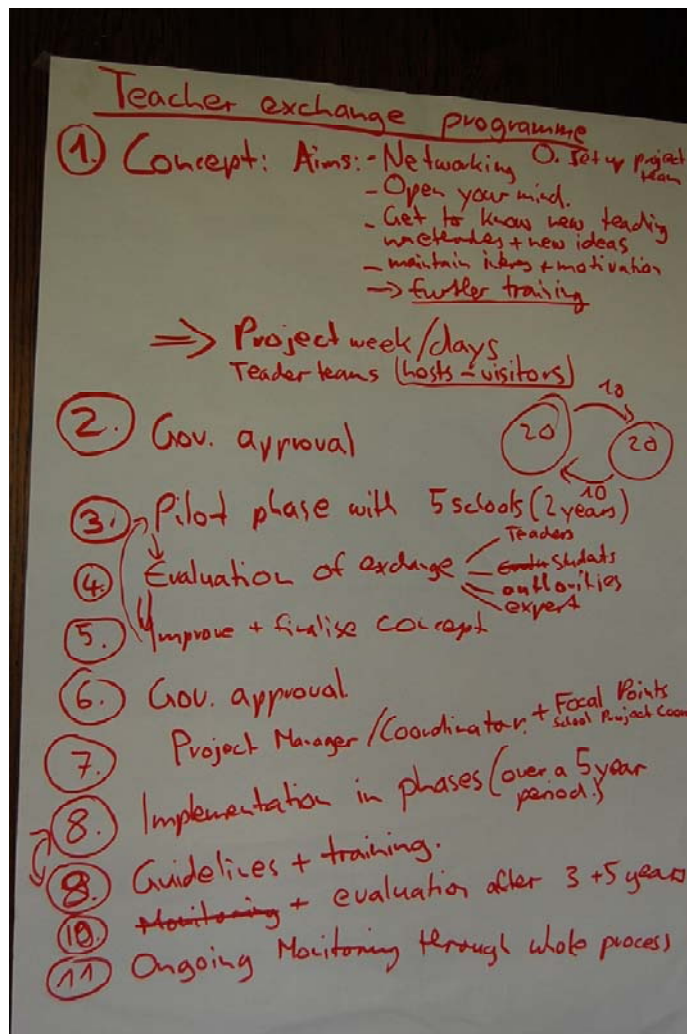
## Realisations: Group 2



## Realisations: Group 3



## Realisations: Group 4





## 7. Evaluation

### 7.1. Evaluation methods

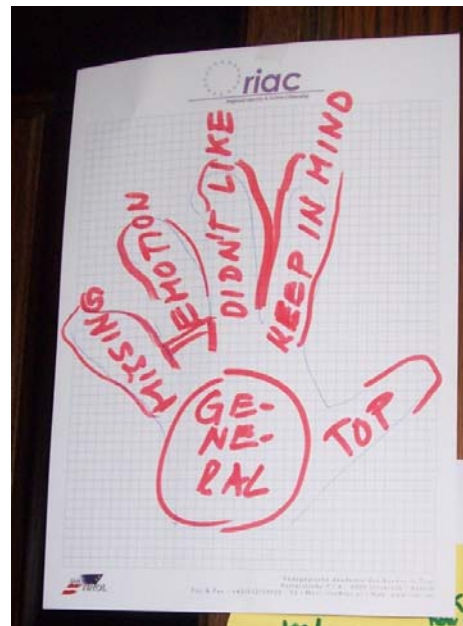
#### 7.1.1. Fingers of the hand:

Everybody gets a sheet of DIN A4 paper, puts his/her hand with stretched fingers on it and draws the shape of the fingers with a pencil on the paper.

Then s/he writes some words concerning the following statements in every written finger:



[www.chaaps.com/.../uploads/2009/12/hands.jpg](http://www.chaaps.com/.../uploads/2009/12/hands.jpg)



Then s/he writes some words concerning the following statements in every written finger:

In the thumb: That was ok!

In the index: That is important for me, I want to keep that in mind

In the middle finger: That was "fuck", I did not like that

In the ring finger: That was emotionally touching for me

In the little finger: That was missing, that was insufficient

In the palm of the hand: something else I want to say; generally...

### 7.1.2. Reflection through Proximity and Distance (Object in the centre)

This method conveys a very quick view of the mood of the group concerning the previous



activities. The participants stand in a circle. An object is placed in the centre, for instance a cow bell, a pencil sharpener, a beer mug or a flower pot. You pose questions to the previous activities, such as: “As a participant I am well informed about the ‘future workshop’!” Each member of the group takes a personal object, for example a shoe, a bunch of keys or a pencil and lays the thing either very close to the centre, if s/he agrees

completely, or further away, the more the statement doesn’t fit. This quick method is only supposed to give a momentary picture of the situation. You can also ask one or a few participants why they put their object at that position, before posing the next question, to get a little more information.

### 7.1.3. One last remark

The group stands in a circle. One after the other says just **one word**, which comes to his/her mind when thinking of the previous seminar. You get a very quick overview of the mood of the group. This is also a good method to say good bye.

### 7.1.4. Evaluation sheets

The image shows two evaluation sheets. The left sheet is titled "YOUR OPINION IS IMPORTANT! THANK YOU FOR YOUR FEEDBACK!" and is for a seminar for teachers and teacher trainers. It includes questions about the seminar's relevance, the presenter's performance, and the participants' satisfaction. The right sheet is titled "B. YOUR REACTION TO THE OFFERED AND RECEIVED" and contains checkboxes for "RELEVANCE OF CONTENT" and "PRESENTATION" for different sessions.

## 7.2. Evaluation Results

### 7.2.1. Intermediate Evaluation

#### Highlights

- The Criteria and school practice
- The theoretical knowledge learnt in the first day were very well put into practice in the lessons today: Visiting the school was the best way of understanding the quality criteria
- Exchange with teachers/lecturers from “all over” Europe.
- Visit to schools
- Way how we work with quality criteria and listening to the other participants
- Visiting the schools was the best way of understanding the quality criteria.
- I like the school visits, especially the visit of PORG Volders. I got some ideas for my lessons and project working.
- The teaching in the primary school about the monster in the sea.
- I really like the concreteness of the brochure ESD in schools and the teacher competences. The group work regarding this was good!
- The atmosphere and the drummer in the upper secondary school.
- Quality criteria indicators.
- Visit to schools was the best thing so far. We had a really nice guide and got to know a lot about ESD and daily school life in Austria.
- Yoga class.
- ESD participation
- Visible ESD criteria in school.
- I was very happy to see the examples of ESD in the schools here in Austria.
- Useful information about Austrian and the other countries school system
- Much motivation for teaching
- New ideas.
- I wish my students have so good time in our school as I have here.
- It was very good to combine very different active methods in the seminar and that you are all open to ideas of other people.
- Icebreaking method (1. day): For me it was a surprise.
- It's an example of best practice for collaborative learning, experiential learning, parental involvement, knowing and sharing common values and being open to international collaboration.
- Construct the knowledge for sustainable development
- Encourage to look at things from different perspectives
- Working on quality criteria on ESD is possible.
- There are different contexts and the seminar is an opportunity to know them and understand there are also different approaches in the ESD perspective.

#### Hopes

- We have the possibility of presentations of the works of participants.
- Simply steps of ESD as support for the teachers doing the job.
- To go forward how to establish a network project among the seminar participants in order to concretise the development of ESD professional competences.
- Looking forward to excursion in 2 valleys.
- Discussions about implementation of ESD at university level (teacher university).
- Practical experiences.
- Theoretical approaches to implement ESD.
- I hope we can listen to ideas of all participants of what they already do an ESD in their own school.
- I'm looking for a way or a frame for bringing ESD simply into the schools. Not as something new but as a frame where they can bring all their activities into, so they can see that they already do on ESD.
- It's an opportunity for improving the existing teaching and learning by innovations useful for a whole school.

- Talking about own experiences.
- Sharing good practices.
- Discussions about ESD approaches with a more international/global perspective.
- Since it said in the information before the course that we could prepare something if we wanted to – the Swedish commission has a powerpoint about our current work with ESD. But that is only if there is a wish from the group to hear that (15-20 min).
- Time to form a discuss how to make exchanges and projects.
- I hope to learn more how to work in practice with ESD.
- More examples form different schools.
- Concrete examples.
- Discuss more what we mean with ESD, because we have different opinion what we think is practical work with SD.
- Interdisciplinary.
- Work only with one subject at time.
- I would like to receive more ideas of how we put into practice the ESD principles in my school.
- I hope that this course will clarify what ESD means.
- I hope that I can apply in my country ESD principles.
- We could prepare one topic for the lesson or future project together – in the meaning of SD.
- I would like to enjoy this beautiful mountains more!
- Concrete examples for ESD and integrating ESD.
- Nice methods to work ESD together with my colleagues.
- Discuss more about ESD approaches.
- I hope we can discuss a bit now we bring all this home to our schools!!
- I hope we can make some contact group.
- More collaboration/cooperation with local and regional schools on ESD related subjects.

### 7.2.2. Evaluation: Fingers of the Hand

(some of the participants wanted to keep their drawings to take them home, therefore this is just the result from 11 participants)

#### Thumb: “top”

- school visit
- cooperation
- The inspiring visit to PORG Volders
- Quality criteria, different method (world café, future workshop)
- Meeting people thinking on similar way, dealing with same issues
- Exchange with people that have different cultural & professional background, group dynamic
- School visit
- The atmosphere
- Structure of the seminar
- Exchange of thinking meeting new people, countries

#### Index: “to remember”

- Met a lot of nice people with many ideas but we need tools
- be two persons all around
- That I can use the quality criterias to make my work with ESD more easy to overlook.
- Keep in touch to exchange new ideas
- People, good practices, great ideas
- Excursion to the really beautiful valley, school visits, each group member with different background
- Quality criteria ESD + portfolio competences for teachers
- The sustainability lesson
- Team building

- New methods new people, visiting the valleys, visit in schools, new practices, quality criteria
- Team working, theory + practice
- I met lovely people, icebreaking

#### **Middle finger: “I did not like”**

- for short time to the excursion
- to not be able to take part in many discussions
- That the lunches were to long, made it a bit inefficient.
- Yesterdays soup for dinner
- Getting up early – I hate
- Full programme with little options for do something private
- Comenius project discussion was at the wrong place, should not be part of workshop
- Nothing
- To many hours of working
- To much to eat
- To much late dinner, but it wasn't to hard

#### **Ring finger: “emotionally touching”**

- all the engagement
- The stories from the other participants on how they work in their countries really made me think.
- The atmosphere at PORG Volders. The personality of the people in our group.
- Knowing nice people sharing problems and results.
- Nature/landscape at excursions/around Aldrans, peaceful, respectful exchange
- As group we really get closer to each other
- Full evolvment of organizers
- Hospitality, school visits
- Listening to each other

#### **Little finger: “missing”**

- more discussions about what we think is ESD
- leisure
- more time for participants to show how they work today with ESD. For examples 10 minutes/country
- Room for people to give a 5 min presentation about their work/organisation (if they feel they have something to contribute)
- I missed more personal experiences
- more networking
- Overview of ESD approaches/theories, exchange with lectures at PHT, time for Innsbruck
- Participants from PH Innsbruck
- More practional examples
- Learning more about the Austria, Tyrol, life in this country
- Time to make a small plan, what can I do in my school, to set 1 step

#### **Palm of the hand: “additional comment”**

- Some time I think it is good if we could have some more deep discussions about we work in practice each school should not require more than 15 minute per school.
- I enjoy very much spending time with the other participants and all the laughs we had together.
- Really nice conference! I would be nice to meet in again in 1-2 years exchange ideas/evaluate!
- It was a very creative and supporting team – I got a lot of inspiration + enjoyed work in it.
- I really like the group and the surrounding area.
- I was worth it.
- I would like to be again in Innsbruck



- With this seminar I get the very important confirmation that I am on the right way. I got more motivation for my life and work.
- Quality criteria of ESD, every time different method of working, we could share different experiences and see how team working is working

### 7.2.3. Evaluation Sheets

#### Results of the Feedback (closed questions)

Field of action participants					
School	9				
Teacher training institution	6				
NGO	1				
Others	1				
<b>2) Did the seminar fulfill your expectations?</b>					
very well	10				
well	7				
<b>5) Please give grades from 1 to 5 (1 = very good, 5 = insufficient)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Location					
Pedagogical University	10	5			1
Hotel Aldranser Hof	10	4	1	1	
Organisation, Information	12	5			
Catering	10	5	2		
Hotel	12	4	1		
<b>6) Feedback to the lectures and workshops</b>					
<b>Relevance of content</b>	<b>1</b>	<b>2</b>	<b>3</b>		

Christine Lechner	13	4			
Regina Steiner	14	3			
Waltraud Egger	14				
Dir. Franz Leeb	13				
Kristina Psenner	11	1			
Hans, Hofer, Franz Riegler	15	2			
Reiner Mathar	15	3			
Barbara Sieber	14	1	2		
World Cafe	16	1			
Future Workshop	17	1			
<b>Presentation</b>	<b>1</b>	<b>2</b>	<b>3</b>		
Christine Lechner	15	2			
Regina Steiner	14	3			
Waltraud Egger	15				
Dir. Franz Leeb	12	1			
Dir. Kristine Psenner	11	1			
Hans, Hofer, Franz Riegler	15	2			
Reiner Mathar	15	3			
Barbara Sieber	14	1	2		
World Cafe	15	1			
Future Workshop	17	1			
<b>7) What do you think about the following statements, please give grades from 1 to 5 (1 = I agree totally, 5 = I disagree totally)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The TT Seminar in Innsbruck has been very important for the international understanding about different cultural approaches to ESD.	10	5	1		

EU-Seminar like this foster networking in the field of ESD.	14		2		
This Seminar contributed to my motivation to work in ESD.	14	2			
I personally had enough possibilities for exchange and networking.	7	7	1	1	

## Results of the Feedback (open questions)

### 1.) Why did you sign up for this seminar?

- To go deeply in professional competences in ESD.
- I'm interested in ESD.
- Project coordinator suggested me and here I am.
- My educational system pays attention to the competence oriented learning & teaching.
- I'm interested in ESD.
- I'm interested in ESD and I didn't know what happened in other countries.
- To know more how to use portfolios in competence management in ESD.
- I wanted to know more about ESD Quality criteria for ESD-Schools.
- I Know more about ESD and its use in school.
- Felt need to improve my teacher competences to get new impulse to my teaching, know new methods, meet colleagues, working in the same field, sharing expressions.
- To learn more about ESD and get some concretized examples.
- I'm interested to know more about ESD and the way how to do it.
- To know more about ESD, to learn new methodologies.
- For doctoral research.
- To learn more how other schools work with ESD and to start networking.
- I'm very interested in ESD and I can bring that to the teachers.

### 2.) Why did the seminar fulfil your expectations?

- All participants discuss how to develop ESD competence and how to implement ESD in Teacher Education.
- I experienced new approaches to new ideas.
- It was a balance between theory and practice.
- I received resources for continuing my work.
- The organisation and the climate in the group.
- I feel confident with ESD now have more good ideas what to do.
- It was useful and interesting.
- I hoped that it would concretize ESD and it did! Also nice to meet the other participants.
- New examples, new methods, the excursion.
- I liked the practices we did a lot, sometimes other things I already knew.
- Theoretical and practical aspects of ESD and lots of sharing experiences.
- We must change our way of thinking.

### 3.) What were the benefits of the seminar?

#### a) for you personally

- Improving my understanding on different perspectives and approaches to the world
- I hear about new ways of teaching in ESD
- Be aware of the whole approach in SD
- Developing intercultural and linguistic competence
- Discussions to meet people with similar motivation

- I improved my knowledge regarding ESD.
- I'm not alone
- Meet new people interested in ESD
- To understand how to work with ESD in our school.
- Will implement
- Much information, good team work, new impressions
- Nice time in Austria
- meeting new people and new country
- inspiration, exchange of experiences
- others experiences
- Learn new techniques and discuss the meaning within ESD
- Find a group with the same way of thinking

#### **b) for your professional practice**

- Knowing methods for dynamic processes
- I learnt about portfolio as a tool of working on individual and team competences in school
- Saw two schools
- To get ideas about theoretical approaches and practical ideas
- I learn new ways to teach ESD
- Way of teaching ESD
- Empowered in accessing ESD
- Get known with the quality criteria
- Function as ESD local point
- New methods, new perspectives, motivation
- Learned a lot. Got connections to others.
- New methods, the exchange
- Something new in the classroom
- Network – find colleagues that want to work with use.
- I am looking now for a way to introduce ESD in my seminars.

#### **4.) Did you miss issues? Which?**

- A more detailed session about the ESD competence & instruments.
- I wished to get more ideas about the existing theoretical approaches to ESD. Who are the famous researchers in this field? What is going on right now?
- More practical examples.
- Make network groups with the different institutions.
- Other men
- More personal examples – case studies
- It would be nice if people with experience could present their work (who wanted and felt they could contribute)
- No!
- Even more methodology
- I thought that I had more practical sessions.
- I hoped to have more certain practice meeting with local teachers.

#### **6.) Feedback to the lectures –comments**

Lecture: Christine Lechner:

- I would like to know more about each participant school.
- Nice and concrete.
- Was familiar with parts of it.

Lecture: Regina Steiner:

- Very fast, no time for discussion.
- Congratulations!
- Not enough time.
- Was familiar with parts of it.



visit of school: Waltraud Egger

- Good ideas to apply in my school.
- Very nice presentation.
- A really nice example – also transferable to other schools.
- Very good teacher, really good to see.

visit of school: Dir. Franz Leeb

- I would like to be with the students of a class for a whole day.
- Was the highlight.
- I would like to teach in this school.
- Really nice to visit the school and feel the atmosphere. Would have liked to see/experience more of the teaching/lectures.
- Very, very interesting.
- Highlight of the course, especially meeting the students.

visit of school: Dir. Kristina Psenner

- I would also be nice to see a normal day!

Excursion "Two valleys": Hans Hofer, Franz Riegler

- It could last longer.
- I saw for the first time how the ESD works in the community (Biogas plant).
- Very beautiful excursion, great organisation, implementation of ESD was not always very clear.
- Beautiful landscape! Very relevant information. Good examples of ESD. '
- I would like to have more time for walking.
- Most convincing way of teaching the notion of sustainability.
- No analysis at the end, much more could be done with the visit.
- Beautiful places, nice guide, great learning situation.
- Nice to see other areas, but the focus of ESD could have been put forward in a better way.
- It was a bit ineffective, would have wanted to know more and not sit in the bus for that long. More outdoor.
- To short time.

Reiner Mathar:

- He gave me interesting ideas: use the video commercials.
- I really loved it.
- I liked the short films.
- Nice and concrete – do we get the powerpoint?
- Gave some new insights.

Barbara Sieber

- She did the lectures in a very interesting way.
- It is new for me and I'd like to use it.
- Seems hard to do, not convinced that it's necessary.

World Café:

- This was a nice method!
- Good method.
- Very, very good.
- Very good to bring home as well.
- Nice method with good outcome.
- Very new and very interesting method.
- Extremely good discussions.

Future Workshop:

- Excellent interactive method of work.

- Interesting way to think forward and to cooperate.
- Nice with more methods. Funny.
- I will use the method in class.
- Very much fun, I enjoyed it very much.

#### **7.) Comments:**

We were a great group! Good, positive dynamics. Very good climate.

#### **8.) My feeling after the participation of the seminar – in one sentence.**

- I have a very good feeling.
- I'm ready to support a new Comenius project on the topic of competence portfolio.
- I have a more clear idea about ESD and how to put in practice which motivates a lot.
- I feel like I have so many things to share with my Romanian colleagues.
- I feel great that there are teachers very interested in ESD. I feel great.
- Competencies for ESD were improved by this seminar for all the participants.
- I'm very motivated it has been a vitamin injection ;-) Thank you!
- I can now start to get operational with ESD.
- I'm glad to have a change to take part this programme, because for me it's very important to develop my knowledge and competences.
- I loved the topics, the lectures and the other participants!
- Smiley!
- I'm pleased with it, but also a bit frustrated with how to canalize all new impressions.
- Satisfied!
- Feel very good and positive!
- Very good feeling!

#### **Other**

- I would like to thank you for such great organisation. Everything was on time and we had a very nice atmosphere for working and also for personal relationships.
- I liked a lot the team-building exercises that united the group from the beginning.
- I'm very glad that I had the opportunity to work in this team. The teacher's presentations were excellent.
- Thank you for all that we were together.